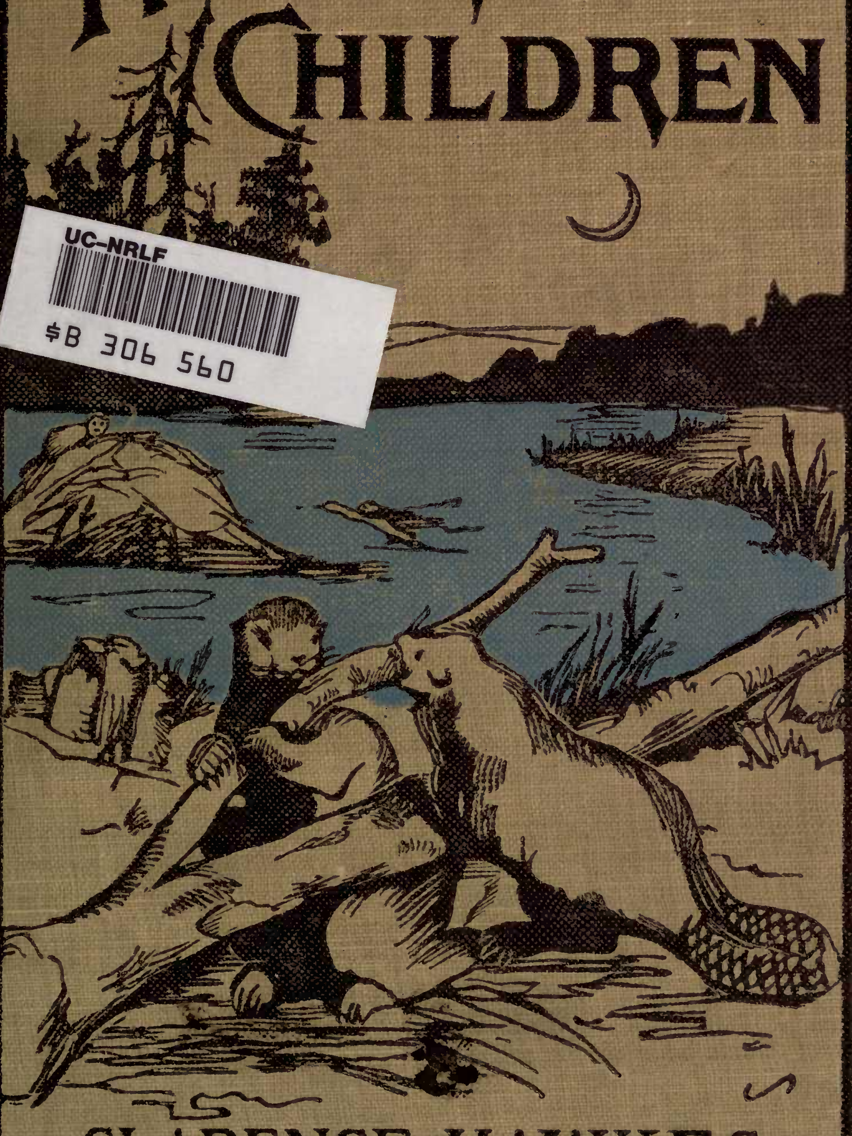
NATURE'S CHILDREN



CLARENCE HAWKES

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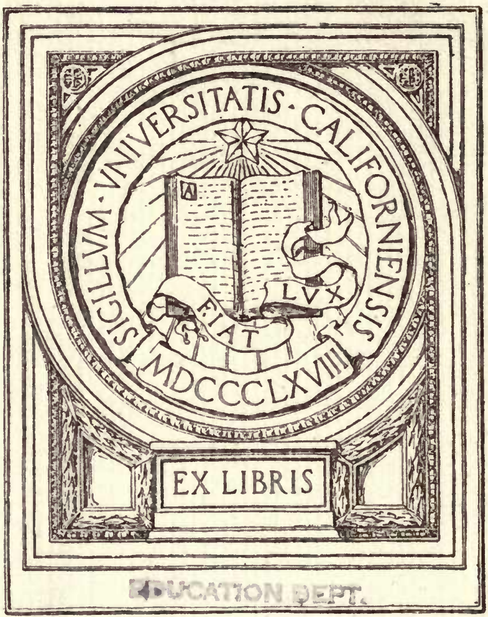
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NATURE'S CHILDREN

LITTLE STORIES OF WILD LIFE

BY

CLARENCE HAWKES

AUTHOR OF
"The Little Foresters," "Stories of the Good Green Wood,"
"The Trail to the Woods," "Tenants of the Trees,"
"Shaggy Coat," etc.

EDUCATIONAL PUBLISHING COMPANY
BOSTON
NEW YORK CHICAGO SAN FRANCISCO

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TO MY YOUNG READERS

The author has sought in this little volume to tell in the simplest manner, something of the life of Nature's children, as they live and grow up in the wild.

So it will be seen that many of the following chapters deal with the babes of the forest. Through these pages you can become acquainted with the fledgling in the nest, the kitfox and the baby rabbit in the burrow, and the bear cub and the wolf whelp in their lairs.

The author has sought to depict faithfully how the children of the woods are reared, and how by instinct and training they acquire such knowledge as is necessary for their kind.

He has also sought to describe the wonderful harmony in nature, and the relation of animal, plant, insect and bird life — to show how each helps and supports the other, and to suggest the beauty and wisdom of the whole plan of nature.

So you will find in this book stories of birds, animals, plants, insects, all depicting the marvels of nature. You will be interested to learn how the birds and squirrels and all the four-footed creatures feed and take care of themselves. How they protect themselves from cold in the winter and escape famine. How with the coming of winter many of them migrate, seeking warmer climes, while others den up and sleep away the cold months.

In the perfect plan of Nature nothing is without its use, and you will learn in these pages what an important part many seemingly useless little creatures play.

The facts about wild life given in this volume merely outline the wonderful story of nature.

So, you will see that this small book is only a primer of natural history, from which you may learn the alphabet, but if it encourages you to read other nature books and to go to the fields and woods for yourselves, it will have served its purpose.

Dedicated to my little readers, with the hope that these simple stories of wild life may create a desire for more nature books, so that finally they will learn to know the life of field and forest for themselves.

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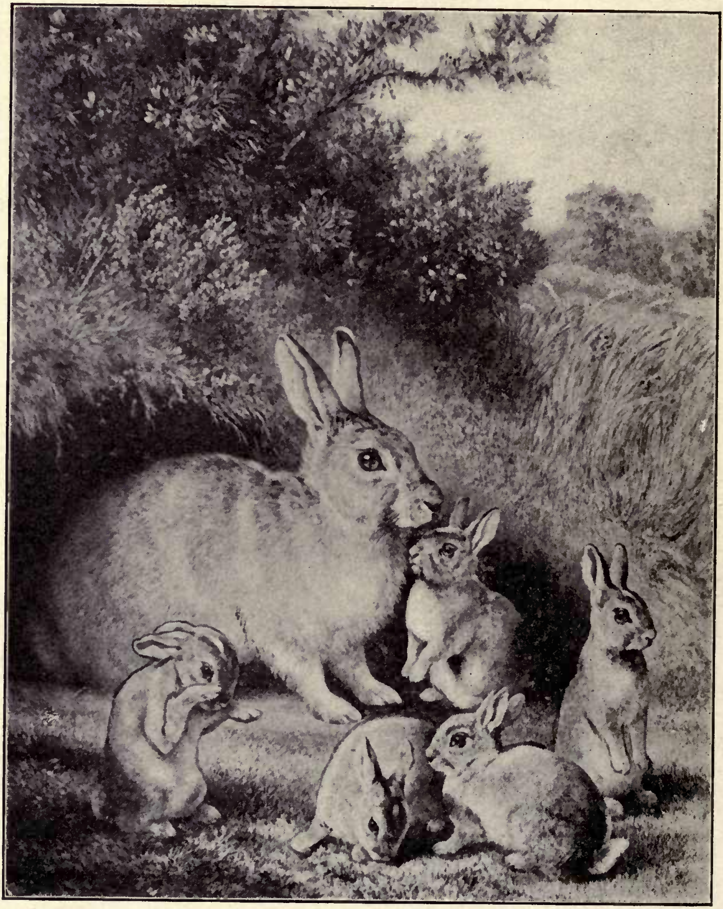

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NATURE'S CHILDREN

I

BEDTIME IN THE FOREST

When you children are tucked in your beds and made comfortable for the night, do you not often wonder what the birds and all the little four-footed creatures do when it grows dark?

When the sun hangs low on the western hills and the golden pencils of light fall aslant through the aisles of the forest there is great activity among all the little furred and feathered folks. You will see the old robins flying to and from the nest carrying angle worms to the nestlings. This is what they have been doing nearly all day long, for the young robins are very greedy and it usually takes the greater part of their parents' time to feed them. All the other bird parents who depend upon worms and grubs for food are feeding the little ones their supper.

Mother partridge is stepping daintily from place to place, closely followed by her large family of ten or a dozen chicks. If the chicks are very small they will be seen to be picking at the leaves and mold, but you cannot see what they are eating. The chick partridges live upon plant lice and small bugs that are so tiny that the human eye can hardly see them. If they are two or three months old they will feed upon larger bugs and grubs and worms.

After the little birds have had their supper there will be a few minutes of glorious singing when all the forest will overflow with song. This song comes from the grateful hearts of the birds who are unconsciously praising God for his goodness.

As the sun sinks behind the hills the song grows fainter and fainter, until at last only a few sleepy twitters are heard, and finally it will all die away.

There is one queer little bird, though, who occasionally twitters away when he happens to wake, and that is the chipping sparrow, but most of the birds sleep quietly, only uttering drowsy peeps in their sleep when they dream of a great fat worm, or something else exciting.

To the two little horned owls who live in a large nest in the top of at all tree, the night time is a very pleasant season. To all the owl family, the night is as day.

The bright light of the daytime blinds the owl, but when the shadows begin to creep through the woods, he is very glad, for he knows that his hour has come. All day long he has been sitting in the tree-top winking and blinking, but now he will go forth to hunt.

The great horned owl, who is one of the largest of the family, and is the father of the two nestlings in the treetop, will take a commanding position upon the top of an old stub tree where he can see all that is going on, and then he will send forth his hunting cry: "Whoo, whoo, whoo, oo-whoo-whoo-oo-oo." Then when the sound has died away he will listen. There is no ear among the bird folk that is keener than his. If a squirrel rustles the grass upon the ground or a bird stirs in the tree-top, he is upon it. The unfortunate victim is seized in strong sharp claws and borne away to the nest, where the hungry little owls will devour it.

The object of the owl in giving his hunting cry is to scare his prey and cause it to move and betray its hiding place.

Besides not being able to see well by day, the owl cannot turn his eye from side to side as other creatures can, but has to turn his head. So he has been given a neck that is very pliable, and he can turn his head in any direction without stirring from his perch.

When the moonlight comes the little baby rabbits are also glad, for now they know that their mother will lead them forth, that they may browse on tender shoots and twigs. The moonlight nights are the rabbits' play time and in the winter they may be seen playing tag with as much enjoyment as children.

The little foxes are also glad when the night comes. It is not their bed-time, but the hour when they go with their mother to the meadow to catch mice. They do their sleeping in the day-time and in the night when the mice are playing in their runways in the grass, they go forth to hunt.

The little dapple fawn will also go forth in the moonlight with its mother, for the deer family sleep in the day-time, and feed by moonlight in the evening and very early morning.

The woodchuck lives more like folks, and he sleeps in the night, but he is a very early riser. When the very first faint streak of daylight shows in the east, he goes forth to sample the farmer's beans. If the young woodchucks are old enough they will go too.

The woodpecker builds his nest in a peculiar manner. He pecks a hole in the tree and then runs it downward for several inches, and there he sleeps at the bottom of the hole. It is hard for the woodpecker to tell when the first faint streak of daylight appears in the east, as he is at the bottom of a dark hole, so he usually makes his nest on the east side of the tree, so that the first rays of the sun will fall into his hole and awaken him. If the hole was on the west side of the tree this would not happen.

So you see the birds and the squirrels; and the other little four-footed creatures who live upon the ground, have their time for coming and going; their breakfast time and their supper time. Now if you know just when their breakfast time is, and where they are likely to feed, you may watch them at their morning meal.

As a rule, the furred and feathered folks awake much earlier and go to sleep much earlier than man. Man is really the sluggard and sleepy-head of all God's creatures.

II

TINY AND BIT

Tiny and Bit were a pair of ruby-throated humming birds that builded their nest in a grapevine close to my bedroom window, when I was a small boy. Although there are about four hundred varieties of hummers known to the naturalists, yet the ruby-throated is the only one ever seen in these parts.

I gave the birds these names because they were so very small. Tiny was the male, with his flaming ruby throat and his wonderful green back and sides, but underside he was not quite so brilliant, although the green extended well down. In some lights his wonderrful ruby necktie would change to orange or yellow, just like changeable silk.

Bit was not quite so large as Tiny and she had no ruby breast. Her breast was gray and her whole suit was duller than her mate's.

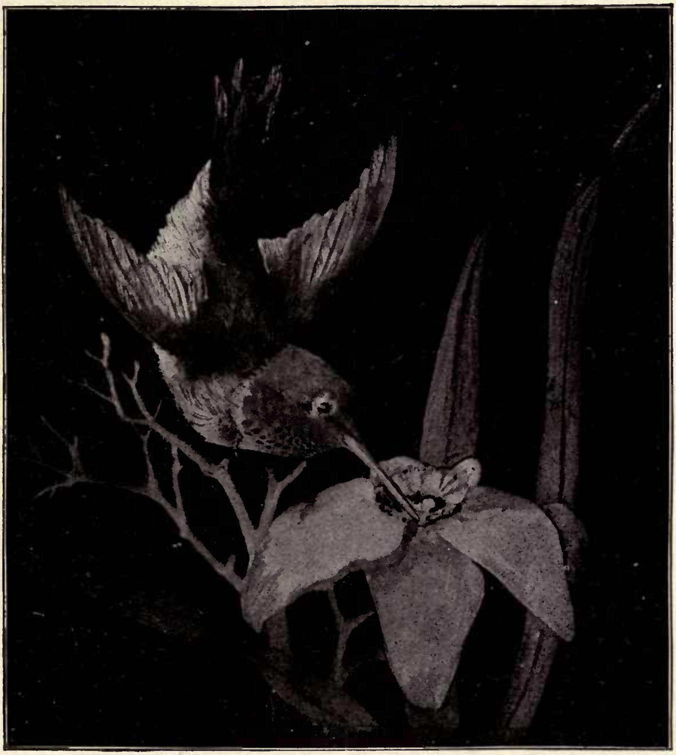
The humming bird usually builds its nest high up in a tall tree, placing it upon some horizontal limb, and finally covering it with bits of moss and lichens, so that it looks just like a knot in the limb, or a fungus growth. This is their cunning way of hiding the nest.

The nest near my window was placed in a crotch of the vine and sheltered by a very large grape leaf. It was built of bits of bark and woody fiber, and lined with particles of frond and very fine fuzz stripped from plants. It was such a mite of a nest that it seemed too small for even Mrs. Hummer.

Once, while Mrs. Hummer was sitting upon her eggs, another ruby-throat came by and began prodding away at the flowers in the piazza box upon the porch.

Like a flash Tiny went after him and they darted to and fro spearing at each other with their long, sharp bills so rapidly that the eye could hardly follow them.

Finally the intruder was driven away and Mr. and Mrs. Rubythroat had the premises entirely to themselves as far as humming-birds were con-



THE RUBY-THROATED HUMMING-BIRD

cerned and the other birds they didn't seem to mind.

I have often heard people ask the foolish question, "Do humming-birds ever alight?" Of course they alight. A hummer is not a machine and cannot keep on the wing forever. Little Bit often alighted on a dead grapevine twig and preened her feathers in the most dainty manner.

I think there were but two eggs, as two was the number of young hummers that we afterwards saw drinking from the sweet at the heart of the honeysuckle blossoms.

Mr. Hummer was very jealous about his nest, and if I made the slightest noise at the window he would dart at the glass angrily.

The little hummers were fed by Tiny on honey and plant lice until they were ready to leave the nest and gather honey for themselves.

They were often to be seen perching upon a dead sprig of grapevine with Mrs. Hummer before they fully learned to fly.

I do not think they could have been over a week old when they left the nest. They were so small that the first time I saw them gathering honey for themselves, I thought them large bumble bees.

A few days later they would come freely to the porch with the two old birds and fly about the honeysuckle. Occasionally they would make funny excited little squeaks, but I did not hear the old birds make any sound except that made by the wonderful lightning-like wings.

The hummer is the most wonderful flyer that I know of. He is such a mite of a bird that you would not expect him to fly rapidly. Most of our other small birds fly rather slowly, but not so the hummer.

I would be sitting upon the piazza watching Tiny with all my eyes and suddenly he would be gone, but where? I had kept my eyes upon him all the time, but his flight had been quicker than my eyesight. Presently I would hear his wings buzzing away in a different part of the lawn, and looking in the direction from which the sound came, I would see this tiny creature looking as though he was hung up in the air before a morning glory trumpet. His body was motionless, but his wings were beating many thousands of times a minute.

One night, when I came home from school, my grandmother met me at the door and told me to hurry in because she had something to show me. I held out my hand to take what she was holding in hers, and to my great astonishment she laid the limp body of Tiny, my wonderful ruby-throated hummer, in my hand.

"O Grandmother!" I sobbed in uncontrollable grief, "he's dead!"

"No, I am not sure that he is dead, child," replied the old lady. "He flew into the house and in trying to get out, flew against the window and was stunned."

How fragile and how wonderfully fashioned he was! His ruby throat gleamed in the sunlight like a genuine ruby and his green back glinted and shone like watered silk.

"What a wonderful little creature he is," I thought, as I held the slight form in my hand. What a marvel it was that this tiny thing had flown two or three thousand miles from the tropics, that he might make our flower gardens gay with his wonderful plumage.

There was a very slight flutter in my hand, so slight that I hardly noticed it, but I looked sharply at Tiny to see if there were any signs of his coming to. Zip! went something by my ear, and my hand was empty.

Grandmother laughed at my wide-open staring eyes and look of astonishment. "He went out of the door," she said. "I guess he is as good as new, for there he is in the yard sampling a lily."

Sure enough! my wonderful hummer was back at his old tricks again and I was glad. No matter how sweet the nectar of the flowers might be, it was none too good for him — my jewel bird.

They stayed with us until early in October, and then I suppose they flew away to the sunny south, for I did not see them again that year, but I climbed out on the piazza roof and got the empty nest, that I might have something to remember them by.

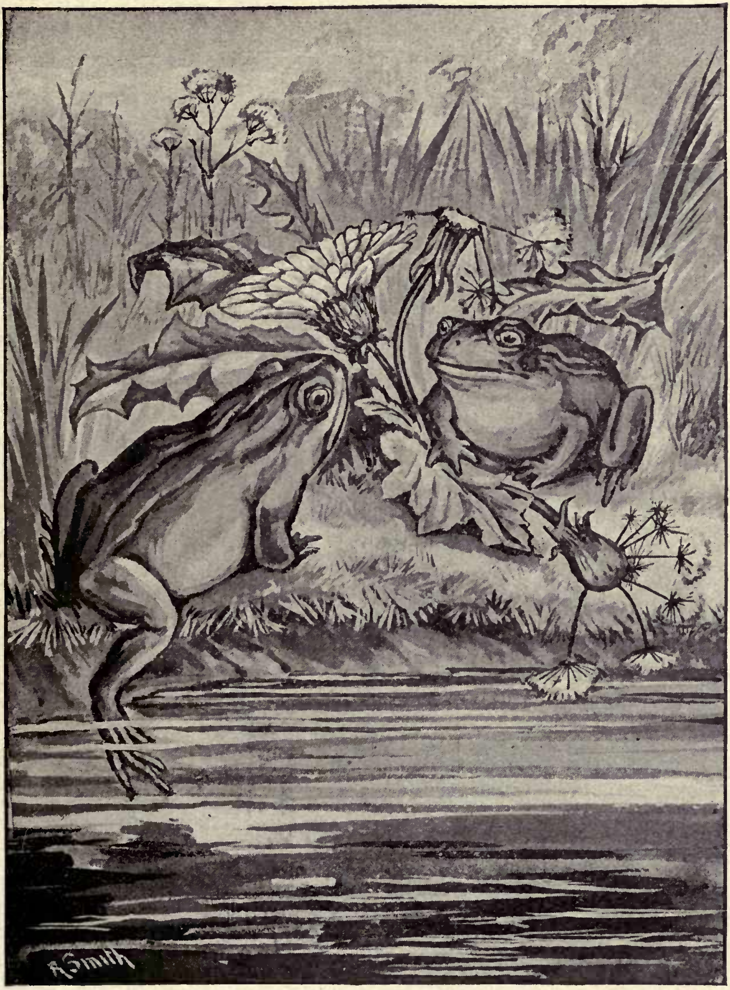
III

THE FROG FOLKS

The toads and the frogs are first cousins, as you might guess from their looks and habits of life. They both belong to the same great family of batrachians, of which there are nine divisions and four hundred and ninety different individuals.

Perhaps the most peculiar thing about the frog is, that he can breathe either in the air as we do, or under the water, as a fish does. This is because he has both lungs and gills, so he is better off than most other creatures in that particular.

The frog's eggs are laid early in the spring in puddles and sluggish water, and left to hatch when the water shall get warm enough, just as the fishes' eggs are hatched. When the egg is first hatched, and for a week or two after, the frog looks more as though he were intended for a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fish than a frog. He is fish shaped and swims by wriggling his tail.

Then he is called a pollywog, or tadpole, and I suppose many of you children have seen him, but when he is from a week to two weeks old, the legs begin to appear, the fore legs first, and then the hind ones, and finally he is no longer a pollywog, but a full-fledged frog.

Then he can jump, swim and catch flies, and go upon the land if he wants to, and this was something that he could not do when he was a pollywog.

The very smallest of all the frogs is called the piping frog. He is hatched from an egg in the puddles just like his fellows, but he finally comes on shore and lives in a tree, and then he is the tree frog. You will often hear his shrill trilling song in the early evening.

This piping frog is one of the most wonderful of all the frog family. Besides living in a tree, he can take off his skin and eat it whenever he wants to, and this is another queer thing for a frog to do. He will begin by pulling the skin on his head off and by crowding it into his mouth, then he keeps pulling more and more, just as a boy would upon a sweater, and all the time he is crowding the skin down his throat with his long, strong tongue. In three minutes' time he will have himself all skinned and his suit of clothes eaten. But there is another skin under this, and that was why he tore off the first. Toads also shed their skins and eat them, but they do not do it as often as the little piping frog does.

In the very early spring, before the ice is quite gone in the brook, this little frog will be lying on the bottom of the stream. Frogs usually dive down deep in the mud in winter and freeze up. I have found frogs frozen stiff, and brought them home and thawed them out, so that they would be hopping about in a few minutes.

Presently this little frog feels in his heart that it is spring. He has not seen the outer world, and it is very dark down at the bottom of the stream where he is, but he feels in some way that spring is near, so he comes to the surface and cries with all his might in a shrill, clear voice, "Spring, spring, spring!"

When the farmer who is making maple sugar at this time hears this tiny frog crying "Spring," he says:

"Well, well, there are the frogs. No more sugar-making for this year."

So you see this little piping frog is a wonderful prophet and can tell away down in the damp and mould that spring is coming.

Have you not often wondered when you saw a frog or a toad catching flies, how he could run his tongue out so far, and how he could do it so quickly? This is the way it is done. The tongues of both the frogs and the toads are fastened on near the front of the mouth, and the end that is down the throat is free, so when a frog wants to stick out his tongue, all he has to do is to flick it out, and there it is, full length.

There is another funny thing about the frog's tongue which helps him in catching flies. It is covered with a sticky substance, so that when it touches the fly, there he sticks, and Mr. Frog can eat him at his leisure.

It is very pleasant to have a family of toads live under one's front door step. They are very social fellows, and their antics are so funny that it is a pleasure to watch them. Children should never injure or frighten toads, as they are very useful as well as interesting.

All day long a toad will lie half covered with sand or dirt, and as his coat is dust color you may look right at him and not see him, but as soon as the sun sets, he comes forth to get his supper of flies and bugs.

Toads should always be encouraged to live in the garden, for they do a great deal of good there. Almost any farmer will tell you that he would rather have a toad to pick off the bugs and worms that destroy his plants, than a boy.

The toad is also a musician and this you probably did not know.

When the spring song of the frogs down in the swamp is at its height and all are piping away with might and main, you will hear one song, loud and shrill, which trembles like a whistle with a pea in it.

This is the loudest and most persistent of all the frog's songs, with the possible exception of that of the piping frog. This noisy musician is none other than our friend, Mr. Hop Toad.

If you will discover him in the act, you will see that he puffs out his throat until it looks as though it would burst, then he sends forth his shrill, tremulous song.

Snakes are the enemies of both the frogs and the toads. I once rescued a poor frog that a hungry snake had partly swallowed. The frog's head still showed, so I took Mr. Snake by the tail and shook him until the poor frog came out, when he jumped away in a lively manner. The snake did not like to have his breakfast taken from him in that way, and he hissed and wriggled.

Hawks and owls also catch frogs, but their worst enemy is the great American blue heron, a long legged bird who looks as though he was on stilts. You will see this queer bird wading cautiously in the stream. Suddenly his long neck will shoot out, and he will spear a frog with his sharp bill. When the frog is dead he will hide him under a stone and go after more frogs. When he has gotten half a dozen, he will gather them all up in his bill and fly away with them. This tells you that there is a nest of young heron away back in the woods somewhere, and that the old heron is taking them their supper of frogs. Some day the old heron will bring his whole family down to the edge of the pond to catch frogs. Then the frogs must lie low, and keep very still, or it will fare hard with them.

The mink, who is a cruel, bloodthirsty fellow like the weasel, kills many frogs, and often more than he cares to eat.

There is also another enemy that the frog has sometimes to meet, and that is the small boy with a stone, but children are gradually learning better than to stone their little helpless friends, the frogs and the toads.

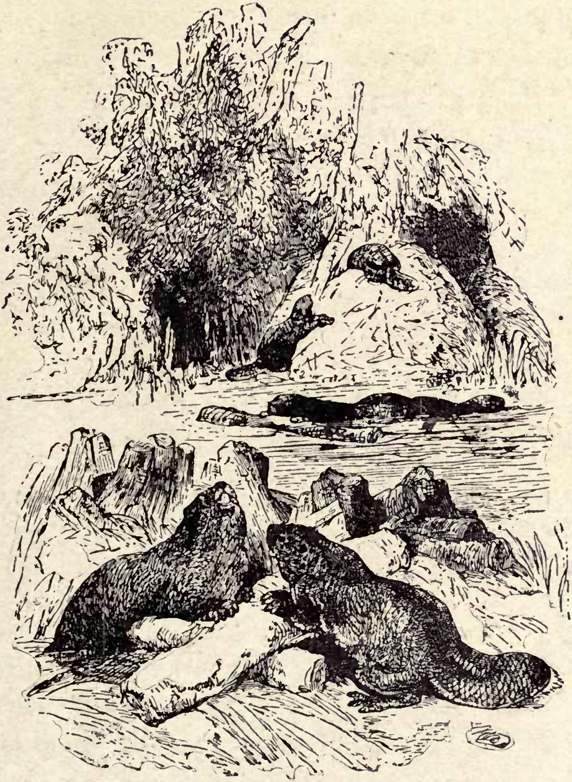
ANIMALS WHO LIVE IN HOUSES

IV

It seems wonderful to think that an animal should be so clever that he would build himself a house to protect him from the storm and the cold, just as does the house of man. Yet two animals that I know of have been bright enough to do this.

The most important of these house-builders is the beaver, and the other is his cousin, the muskrat, who is sometimes called the little beaver.

The beaver is also clever in other ways and altogether he is the most interesting animal for you to study that I know of. When the beaver wants to build himself a house, he first considers how he shall protect it when it is built, for you must remember that the beaver's house is only a mud hut, and his many enemies could break into it if he did not take great precaution against them.



BEAVERS AT WORK

As the beaver is a good swimmer himself, and many of his enemies are not, he concludes that it will be well to place his house where it shall be surrounded by water. So he sets to work and builds a dam, that he may have just the kind of a lake he wants.

The building of a dam seems even more wonderful than it does to build a house, but the beavers have been dam-builders for centuries, and they understand it almost as well as men who have been trained to build dams.

Here is one way that the beaver builds his dam. He finds a spot where the stream has high, narrow banks, and then fells two trees across it. But how does he fell the trees? you may ask. He has no axe and he could not use one if he had.

No, the beaver does not use an axe in felling trees, but with his sharp, shovel-shaped teeth he gnaws them down. This seems almost too much to believe, but it is true. The beaver stands upon his hind legs and gnaws a girdle about the tree, then he gnaws another about three inches above the first. He then pulls out the chip between and the first cut is made. He keeps on repeating this act until the tree falls. When the beaver has felled his two trees across the stream he thrusts stakes in the mud in front of them and then fills it in with brush. Next come the sods and the mud, and finally the whole is so plastered over that it holds water, and the beaver's dam soon fills, and he has a fine woodland lake.

Another way that he builds dams, is to cut the logs up into short pieces and build a cobwork dam, just as a child would build up blocks. He can also build a dam by weighting down brush with stone, and then piling on sods and dirt.

When the dam has over-flowed the country and made a good-sized lake, the beaver thinks about his house. This is usually located on an island in the middle of the lake, where the beaver's enemies cannot get at him.

For his house the beaver builds a circular wall, about eight feet in diameter, just as you would build a snow fort. When it gets up high enough so that the mud would fall over, if not supported, he puts in rafters, just as man does. This is done by thrusting sticks in the mud wall, and bending their tops all together, where the beaver's chimney for his house is to be.

He has to use great caution in building the roof of his mud house, for the mud keeps falling through if he is not careful. At the very top of the house he leaves a little opening, which is his chimney. This is done so the bad air can pass out in the winter time, when the beaver stays all day in his house.

During the last of the beaver's house building it is freezing every night, and that helps him, for the mud freezes as fast as he puts it on, so that it will stay in place.

From the middle of the floor inside the house is a hole running down into the ground, and finally out into the lake. This is the beaver's front door. No one can enter his house except by this door, so he is well protected from all his enemies who do not swim.

When the house is finished it is quite late in the autumn, so he thinks of laying in his winter supply of food.

The beaver's principal food is bark, so he goes up stream, and cuts many small trees. These he cuts into sticks about three feet long and then floats them down to the dam, where he secures them under water. This he does by thrusting them under roots and stones. He also piles up a lot of this wood against the dam, and the top sticks will keep the under ones down.

At just the right time the beaver finishes his wood cutting, and then there comes a great freeze, and the beavers are locked under the ice for all winter. Now, do you not see what a bad plight he would have been in if he had not laid in a store of bark to last him through the winter?

Now he will sleep in his warm house when the wind howls outside, and when he is hungry he will swim out under the ice and get a stick from his woodpile. He will take the stick into his house and peel off the bark and eat it at leisure.

There are usually several beavers living in one house, and their breath keeps the house quite warm and comfortable.

The cold weather that froze the ice on the lake and locked them in has also frozen the mud of which the beaver's house is made. So now it is as hard as stone, and a man could hardly break into it with an axe.

The wolverine, who is a mean, sneaking wolf, may come prowling about the beaver's house, but he cannot break in now it is frozen up. The wildcat and the lynx may also visit the pond in hopes of getting beaver meat, but they will go away unfed, for they cannot break into the strong house.

So while the winds howl and the cold freezes, the beaver lies snug and warm in his house, well protected from all his enemies.

And all this because he thought to build him a house, and surround it with a broad lake to protect him from his foes.

V

THE MERRY LITTLE WOODCHOPPERS

In this chapter I am going to tell you about the woodpecker family, whom I call the merry little woodchoppers.

There are three very sure ways of telling a woodpecker, so that almost any boy or girl can learn to tell them. First, if you see a bird with a red patch upon his head or the back of the neck, it is a woodpecker. Secondly, if the bird is drumming upon a dead limb of a tree with his beak, making a great noise, that is another sign. Lastly, if the bird happens to be flying, and you notice that he goes with a galloping up-and-down motion, it is probably a woodpecker. There is but one other bird that flies like this, and that is a little yellow bird, which you could not mistake for a woodpecker.

Of the smaller woodpeckers there are four common kinds. The red-headed, the hairy, the downy, and the yellow-bellied sapsucker. Mrs. Redhead has a bright red head as well as Mr. Redhead, but Mrs. Hairy and Mrs. Downy do not have the red stripe upon the neck, so if you see a woodpecker without red upon its head or neck, it is either Mrs. Hairy or Mrs. Downy. If it is a woodpecker about seven or eight inches in length or of about the size of the cedar waxwing, it is Mrs. Hairy, but if it is only about six inches long, or about the size of a chickadee, it is Mrs. Downy, who is the smallest of all the woodpecker family.

All of these woodpeckers, with the exception of the yellow-belly, do a great deal of good, for they go up and down trees in Spring, Summer, Autumn, and Winter, looking for destructive borers and flies that injure the trees. When they hear a borer under the bark, with their strong bills they soon bring him forth and eat him. But the yellow-belly is a harmful bird, although he is very beautifully marked. As you will guess from his name, he is fond of sap, and this will often lead him to make so many little sap wells in a tree as to kill it. He also loves to strip off

THE DOWNY WOODPECKER

the outer bark from fruit trees and eat the tender inside bark.

In the early spring, when the sugar-maker goes forth to set the sugar camp, yellow-belly is on hand for his share of the sweet plunder.

He will pick out a maple tree that he knows contains very sweet sap and then he will go up and down upon it boring sap wells in the bark. Sometimes he will bore as many as fifty in a single tree. Then, if the sap is running freely, he will go up and down all day long drinking sap.

All the members of the woodpecker family nest in a hole in a tree, which they chisel out with their own sharp beaks. You will often see a woodpecker clinging to the bark of a tree with his claws, with his broad tail outspread against the tree for purchase, while, with his sharp beak, he strikes so rapidly that you cannot see the motion of his head. Down come the tiny chips in a shower, and you know that the woodpeckers are at work upon their nest.

When they have bored in some two or three inches, they run the hole down a little way, and there at the bottom is the nest, where the eggs are laid.

Some observers say that the woodpecker always builds his nest upon the east side of the tree, so that the sun will shine into it in the morning and awaken him, but I am not sure whether that is so or not.

The hairy and the downy woodpeckers stay with us all winter long and it is very pleasant to hear their merry rat-a-tat-tat on a cold winter morning.

For their winter quarters, the male woodpeckers drill a deep hole in the under side of a limb, and then run it down into the trunk of the tree, and there at the bottom they sleep quite snugly in the coldest weather. But poor Mrs. Woodpecker is often forced to live, during the cold winter days, in the last Spring's nest, which is not as warm as the cosy quarters of Mr. Woodpecker.

The flicker, or golden-winged woodpecker, is a larger cousin, who is a very handsome and interesting bird. This bright bird has so many names that I hardly know which one to call him by. He is known by thirty-six different names in our own country.

He has a pair of wonderful golden wings, which are very conspicuous when he is flying, and he is dotted freely with black dots. Most of the woodpeckers are silent birds, but cousin golden wings is a noisy fellow and almost boisterous, with his prolonged cackle whch sounds like "cah, cah, cah, cah, cah," or his pleasant "wick-up, wick-up, wick-up".

This gay woodpecker is often seen upon the ground looking for worms and slugs, but you will rarely, if ever, see any of the black and white woodpeckers on the ground.

Golden wings does not stay with us during the cold weather, but flies away to the south, and we miss his cheery call notes and his bright yellow and black coat.

It is a comical sight to see two golden-winged woodpeckers making love to a demure female. They will bob their heads about and make bows to the lady bird, and then back off and look at her from a distance and then come forward again, in the most gallant manner.

The largest and most gorgeous of all the woodpecker family is the pileated woodpecker, which is as large as a crow. His coat shines like black satin, and his crest is like a flame, but he is rarely seen in these parts, although a sight of this shy and wonderful bird is worth travelling miles for.

So these are my merry little woodchoppers. If you will note carefully the description that I have given of each, you will be able to tell their names for youself, when they light upon the old apple-tree, and set the echoes ringing with their merry rat-a-tat-tats.

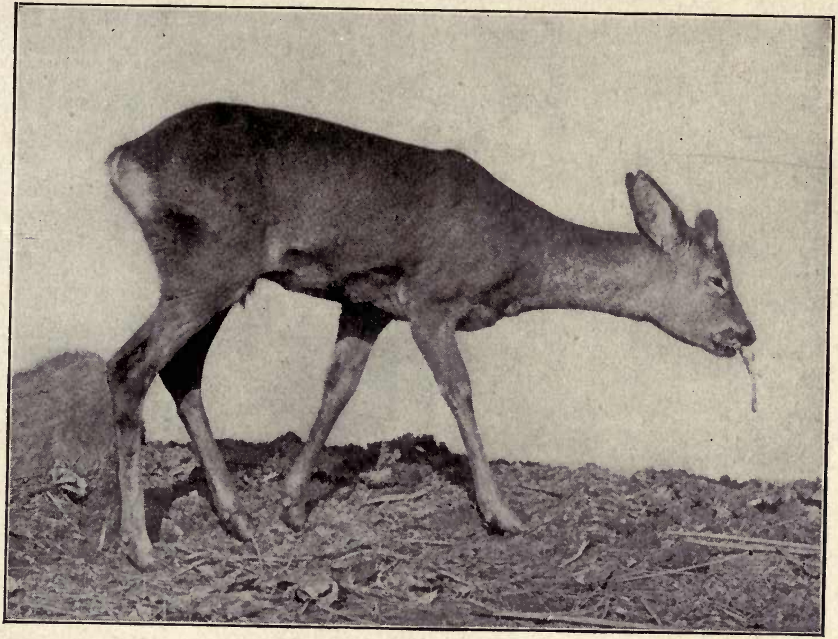
VI

HOW LITTLE ANIMALS AND BIRDS ARE TAUGHT OBEDIENCE

It would surprise you children, who do not always mind quickly when your parents speak, to know how the little animals and birds are taught obedience in the fields and woods, and how well they mind.

This is necessary to keep them from harm, and their wild parents do not hesitate to punish them most severely if they persist in disobeying. When a mother deer finds that her offspring will not mind, and that no amount of effort on her part will make it, she sometimes kills it, for she is wise and knows that it will soon meet a tragic death at the hands of some wild beast if left to disobey.

When the young wild creatures are born, they have no wisdom of their own, only a certain



A LITTLE FAWN

cunning that they have inherited from their ancestors, who have roamed the woods so long and had to take care of themselves in many perils. So the young forest babies have to be taught by their parents.

This teaching is partly by imitation, for the young soon learn to do what they see their parents doing and it is these lessons that the wood-folk must learn if they are to live and be happy after their kind.

So the baby grouse, or partridge, as it is often wrongly called, is taught to hide at a signal from the mother grouse. No matter what the chicks are doing, and it may be something that they would not like to leave off, like picking up bugs in the mould, when the old partridge gives the call that means hide, each chick must hide instantly to the best of his ability.

It would surprise you too, to know how well they can hide. They may be scampering around among the ferns and grasses, but at the sound of alarm, all will disappear as suddenly as though the earth had opened and swallowed them. One will run under a leaf, another may crouch by a stone that just matches his color, or perhaps one may be in plain sight, but he will keep so still that you think him a bit of dirt or the end of a stick. Then, no matter how much you tramp up and down, even though you stepped upon them and killed them, not a chick would move until the mother partridge gave the call that meant come.

When the doe leaves her little dapple fawn under the top of a fallen tree, and goes down to the bank of the river to eat lily-pads, she says to the little fawn, "Now I am going to the river to get breakfast, and whatever comes along, you stay right here under the tree-top and don't make any noise and don't move. If you do something will get you."

So the little dapple fellow will curl down under the tree-tops, where the boughs hide him nicely, and go to sleep. Perhaps he will awake long before his mother's return. Maybe he will be lonesome and want his mother, or perhaps he will see some wild animal, like the wildcat, or the lynx, going by.

He will be very much afraid of such an animal, but if he is wise and minds his mother, the wild creature will probably not find him. But if he should bleat, or start to run, he would soon be overtaken and killed.

The old bear will often leave her cubs and go away for hours, and expect to find them just where she left them when she returns.

Perhaps when she goes away she says to them, "Now, Johnny Bears, I am going after a young pig and I do not want you to stray from home while I am gone. If you are good and do as I tell you perhaps there'll be some pig for each of you, but if you are naughty you will be punished."

Then perhaps the old bear will go just a short distance and hide behind a tree to see if her cubs are going to mind.

For awhile the little bears may have a fine time wrestling, for small bears like to wrestle just as well as boys do, but finally they will wonder where their mother has gone, and perhaps they will start out to see.

Then the old bear, who has been watching all the time from behind a tree, will pounce upon them, and give them a terrible box apiece upon the ears, and send them whining back to the den. The old bear is a wise mother and she knows that it is much better for her to box the cubs' ears, even if it does hurt, than it would be for them to follow after her and perhaps be killed or taken alive for some menagerie.

These are only a few of the ways in which wild mothers seek to teach their young the wisdom that has protected their kind so well.

They are not all taught the same kind of lessons, but each is taught the thing that will be useful to him in keeping well and happy.

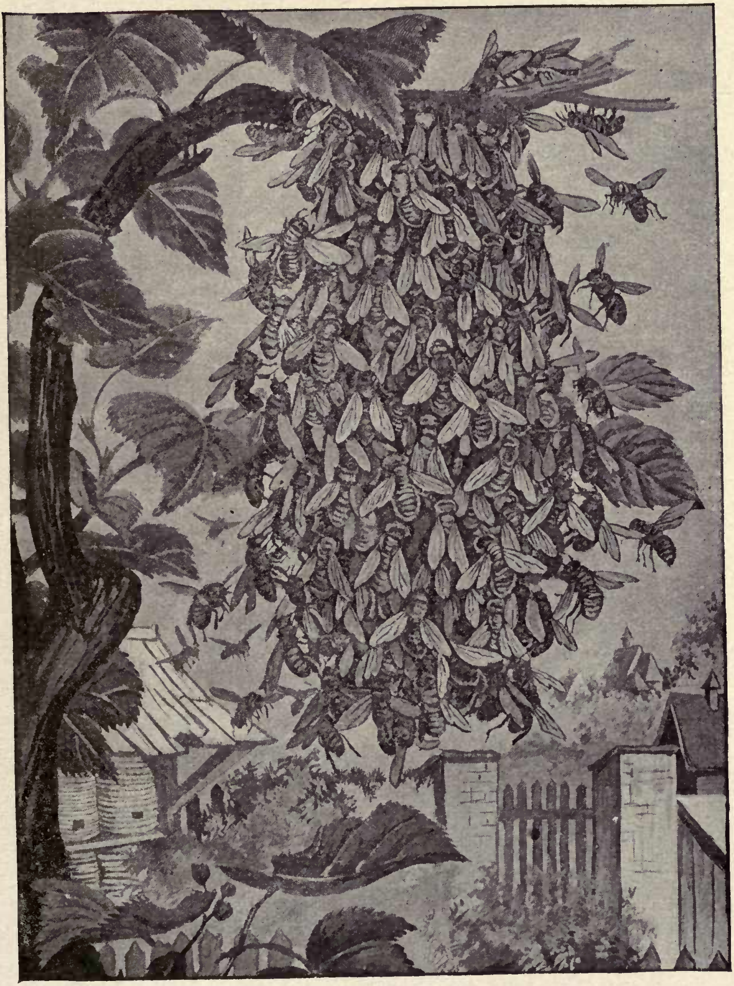
VII

THE LITTLE WHITE HOUSE ON BEE STREET

The little white house on Bee Street is a beehive standing in a row of a dozen white houses which are side by side and of an equal distance apart, like the houses on a street.

Never did the house of man contain as many inhabitants as do these houses of wonderful insects. If the swarm is a small one even, the house will contain fifteen or twenty thousand inhabitants, but if it is a large one it will contain fifty or sixty thousand. This number of people would make a good-sized city.

In all this large family there is but one mother, and that is the queen bee. She is larger and longer than her subjects and rather more beautiful. Her work is to lay the thousands and thousands of eggs necessary to keep the life of the



BEES SWARMING

hive going. You must remember that the life of a bee is from a month and a half to two months, so eggs have to be continually hatched out to make up for the bees that are constantly dying. It is estimated that in the laying season the queen lays from two to three thousand eggs per day. In the course of her life, of a few years, she lays over half a million eggs.

Nearly all of the rest of the bees in the hive are the queen's daughters, or the working bees. Her sons are only a few in number compared with the daughters. They do not work and lay up honey as do the daughters, but are lazy fellows who have a fine time while they live, eating the honey that the workers gather, and flying about the fields.

As soon as the new bees are hatched they are put in charge of some of the workers, who are then called nurse bees. These nurse bees feed the little new bees, and take care of them until they are large enough to fly outside, and look out for themselves.

Sometimes the hive will be fairly alive with the little new bees and then the nurse bees are kept very busy feeding them. They are fed upon what is called bee bread. It consists of pollen taken from the early flowers, stuck together with honey. Upon this food the young bees thrive and they are soon able to go forth and gather honey for the hive.

When the lilac and the first fruit trees blossom you will notice that they are swarming with bees. In nearly every flower there is a bee. She is standing almost upon her head reaching away down into the flower for the honey which the sun and the rain have stored up in some marvelous manner. The bee licks out the honey with her tongue, and places it in her honey stomach. This stomach is just in front of her real stomach. By the time the bee gets home to the hive the honey is partly digested, and that is why sick girls and boys can often eat honey when they can eat nothing else.

All of the sections at the top of the hive are filled with wax cells and into these cells the bee puts her honey. When the cell is full she seals it up.

The cells were also made by the bees. From flower to flower she went, gathering the wax until she had enough. Then she worked it into place and drew it out into these wonderful cells.

The bees not only visit the orchard and the flower garden for honey, but they go away into the deep woods, and gather fine honey from many of the trees when they are in blossom. The basswood tree is celebrated for its honey.

Also all the wild flowers along the roadside are visited. No flower is too small or too insignificant for the bees to take notice of, provided it contains honey.

They will travel as far as three miles for honey when they cannot readily get it nearer home. The flowers from which they get the most are the white clover, the golden rod, the buckwheat and the blossoms on the basswood tree.

I have seen it estimated that the bees must visit sixty-two thousand heads of clover to get a pound of honey, so you can see how hard they must work, and what labor it is merely to make one pound of honey.

When we consider that a hive sometimes makes one hundred pounds in a season, the number of trips that they would make would be almost more than one could calculate.

All through the summer months the bees are busy gathering honey and also late into the autumn, for you know the goldenrod and the purple aster bloom very late. It is not until the really cold weather sets in that they go into the hive for good, where they are sleepy and stupid until spring comes again.

If the season has been a good one and the bees have laid up a lot of honey, the bee keeper takes away a part of it from the hive for himself.

He usually leaves from ten to twenty pounds for the bees to eat during the cold months. Sometimes he also feeds them melted sugar so that he can keep more of the honey for himself.

During the winter the bees gather together in a large round cluster and keep continually moving about so as to keep warm. Of course, the bees in the middle of the cluster are the warmest, so they keep taking turns at the middle.

No matter how far away from home the bee strays, when she is gathering honey, she is never lost. As soon as her honey stomach is full she will start for home in a course as straight as a ray of light.

The honey bee will rarely go into any house but her own. At the door of each hive are a dozen or twenty sentinels who watch the bees carefully as they enter, so as to see that other bees do not get into the hive and steal their honey. If any strange bee is found trying to, she is quickly driven away.

Sometimes when the hive gets too full of bees, a very queer thing happens. The queen decides that she will take a part of the members of her household and go away. Then there is a great buzzing of wings, and sometimes the air is fairly black with bees about the hive.

Soon the queen leads them to some nearby tree where all hang upon a limb. Each bee hanging to the one above it until there is a long cluster. Often it is as large as a peck measure. Then the queen sends away some scouts to find a new place for them to live.

Perhaps it will be in a hollow tree in the woods, or maybe it is in a hole in a cliff. If the bee keeper does not get them into a new hive before the scouts return they will all fly away and be lost.

VIII

THE FRIENDLY TREES

It will surprise you, children, if you have never stopped to think about it, to know what a great blessing trees are to man. Not only to man, but also to the birds and four-footed creatures, many of whom could hardly live without them.

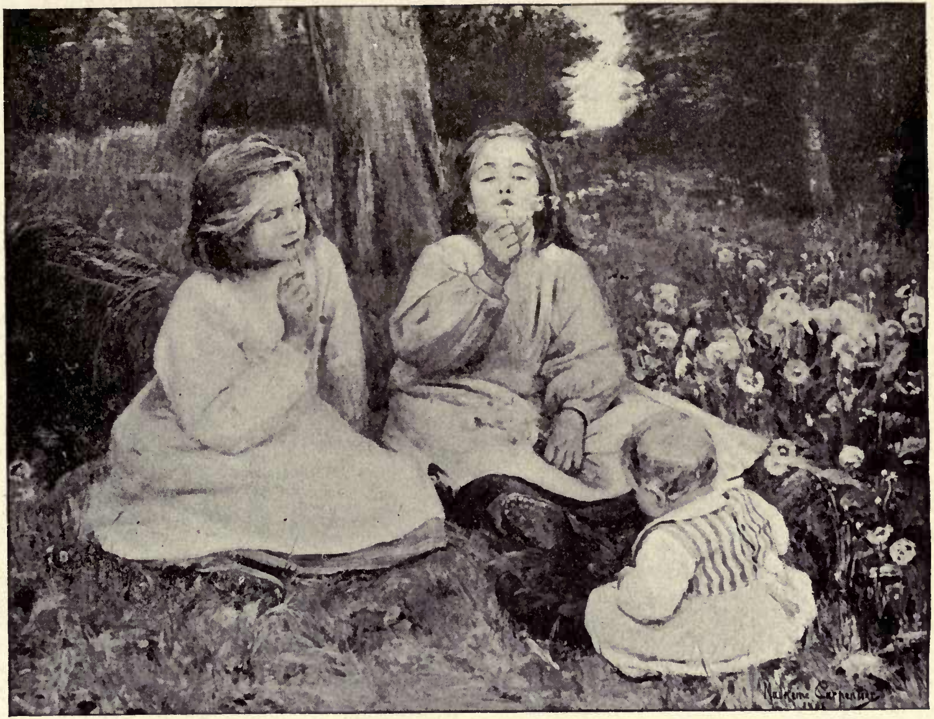
Every child knows the trees about his home. They are all associated with his play, which could hardly go on without them.

The old spreading elm where the swing is hung and the maple under whose friendly shade a cubby-house was builded. The horse chestnut, with its peculiar leaves and blossoms, and still more peculiar nuts; the mountain ash, standing in the back yard, glowing with bright berries in the autumn.

All these common shade trees, and many more that I have not mentioned, are familiar friends, and dear to the heart of every country child, and many city children enjoy shade trees as well, for man has felt that he could not get along without trees, so he has brought them in from the country, and planted them along all the broad streets and on his lawn, that his eyes might be rested by the pleasant green foliage.

If the shade trees are dear to the heart of childhood, the fruit trees are still more highly prized. What would your home be without the peach and the pear trees, the cherries, the plums and the apples? What pink and white clouds of sweetness, beauty and fragrance the trees are in blossom time and what pleasing colors the fruit takes on when it is ripe. In the tropical countries some people live entirely upon fruit, so the good trees give them all their living.

If we were to journey into foreign lands we should find many queer trees, some bearing figs, others dates, and others cocoanuts, while the strangest of all is called the bread tree. In the land where that tree grows the housewife does not have to make bread at all, for it grows already made upon a tree.



IN THE SHADE OF THE TREES

But we do not have to go so far from home to find uses for trees that would make it almost impossible for man to live without them.

If there were no trees, of what would man build his houses and great ships? Of what material would he make his furniture and many of his farm tools, his wagons and his sleighs? Of what would he make the paper that our books and newspapers are printed on, for nearly all of this paper is made from wood, which is first ground up very fine and then pressed into thin sheets.

Even the rude American Indian discovered some of the secrets of making use of trees. It was he who first knew that the sap of the maple was sweet, and that, if it were boiled down it would make delicious golden syrup. He also fashioned his canoe from the bark of a tree called the canoe birch, and the framework for the red man's wigwam was small saplings. The loads that the Indian ponies drew were often supported by two poles. One end being fastened to the horse and the other allowed to drag upon the ground. So you will see that even savage people knew and valued the trees.

If the trees are a great benefit to man, the birds and the squirrels and many of the four-footed creatures who live upon the ground could hardly get along without them.

Many of the birds and most of the squirrels have their homes in the trees. Where would the oriole hang her wonderful basket nest if there were no trees? You might say that the woodpecker would chop himself a hole and make his nest in a telegraph pole even if there were no trees, but you forget there would be no wooden telegraph poles without trees.

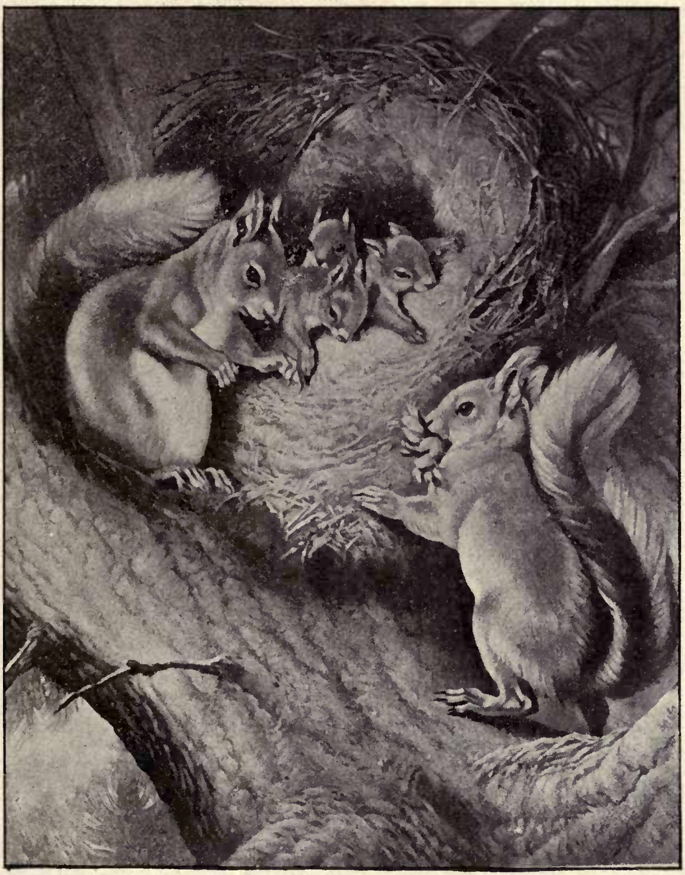
Where could the gray squirrel hang his winter hammock if not in the top of a tall maple? Of what use would the flying squirrel's queer wings be if he could not first climb a tree so that he might coast down on the air to the foot of another?

The trees shelter the birds and squirrels from their enemies and give them a place in which to hide from danger, and they also shelter them from both heat and cold. In the summer the birds and squirrels can sing and chatter in the cool green shade, and in the winter many of them can hide away in hollow trees during the bitter cold.

The trees are not only the homes of many of the birds and squirrels, but they also give them much of their food. Chestnuts, walnuts, butternuts and hazel nuts are all dear to the heart of a squirrel, and they all grow on trees or bushes. The partridge too is fond of the beechnuts, but the trees feed the partridge in still another way, when food is scarce and the need is very great.

Did you never see the ruffed grouse budding in the orchard just before dusk of a winter's night? If you have not, you have missed something worth seeing.

When I was a child and lived upon a farm the partridges would get their supper very near to the house during the coldest weather, and I used to spend a pleasant half hour watching them. They would perch in the top of the tree, where the wind swayed the branches so that they could hardly hold on, and pick, pick away at the buds. When their crops were full as they could hold, the birds would whir away to the deep woods and roost in



A HOME IN A TREE

the top of an evergreen tree, if it was not too cold, but on the coldest night they would bury themselves in the snow so that the wind and the cold could not get at them.

The red squirrel also lives on buds, when he cannot find any of his store which he has scattered about in a dozen places, but he likes a frozen last year's apple better, when he can find it. He gnaws the apple open and eats the seeds, just as he would gnaw open a nut and eat the meat, and he will eat the apple too, if he is very hungry.

The rabbit also knows the value of buds and bark, but his principal food is bark. He also likes to use the tree for a rubbing post, and you will frequently see where he has rubbed off some of his white fur. Each rabbit has his own particular rubbing post and he is greatly offended if another rabbit uses it.

There are also some trees which bear berries late in the autumn and these berries stay on all winter long. Such are the mountain ash and the bright berries of bittersweet and sumac. Many of the birds depend upon these winter berries for food. The quail family live upon them and there are quite sure to be quail where these berries are plenty. The quail is a stout-hearted little fellow, always whistling his cheery "Bob-White, Bob-White, Bob-White," in heat and cold, in summer and winter, and he would often go hungry if it were not for the trees that feed him.

IX

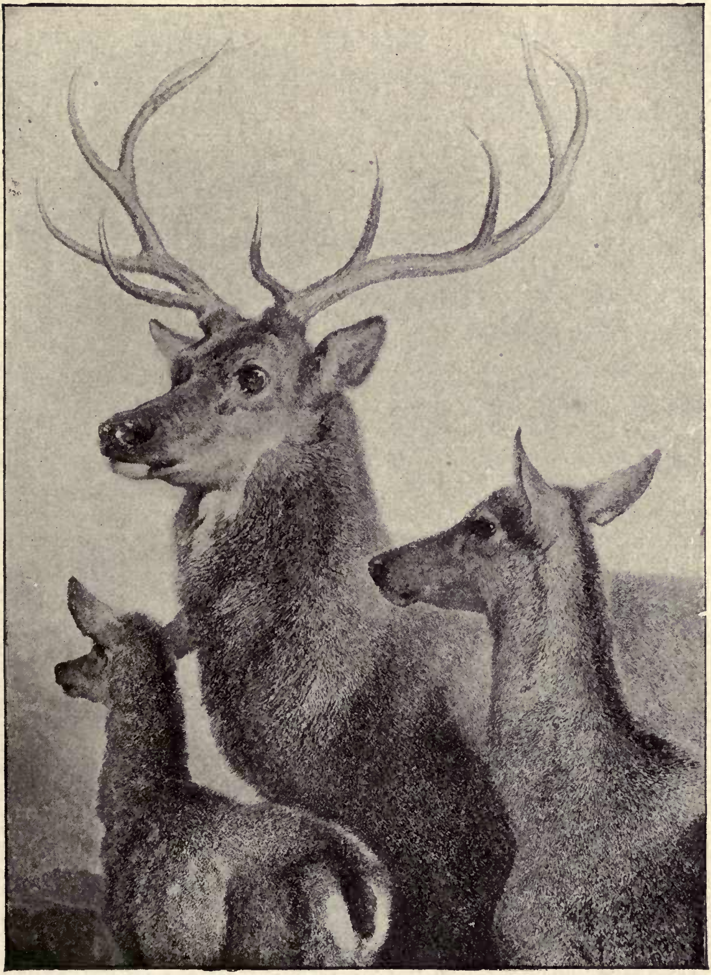
BIRD AND ANIMAL DOCTORS

Just how much birds and animals know about taking care of their diseases and wounds no one can tell surely. Some writers claim much more for their skill in this particular than do others, but from the best knowledge that can be gathered they do a great deal for themselves that seems quite remarkable.

To all the wild creatures, salt must really be considered as a medicine, as it is not obtained naturally in any of their food products.

All the members of the deer family, among which are the moose, elk, caribou, black-tail and white-tailed deers and many other varieties, know the value of salt. They will travel for miles to the salt lick. The path leading to the lick will often be worn deep into the soil like an old cow path.

At the deer lick is a favorite ambush for the



THE DEER FAMILY

Indian hunter, the bear and the panther, for all know that sooner or later the deer will come to the lick for their medicine.

The mother partridge knows how to doctor chicks better than the poultry fancier does. She knows that if they are to be kept free from lice, nits and all other vermin that the feathered folks are subject to, that they must have their daily dust bath. Not any kind of a dirt bath will do either, but it must be a spot with certain properties in the soil.

If the chicks become dumpy and drooping, she knows that their systems need clearing out, and she leads them to certain acrid berries which are just the medicine they want. All through the season she varies their food as their size and health vary, and altogether she is one of the very wisest of wild mothers.

When the hunting season comes, if she or any of her family are wounded, and are likely to bleed to death, they will plug up the wounds with very fine down taken from under their coarse feathers and thus stop the flow of blood.

Even creatures as low down in the scale of intelligence as the fishes show considerable skill in taking care of themselves.

Old fishermen tell us whenever the salmon is injured, and his bright silver scales scraped off in the spring migration up the northern rivers, this wise fish at once turns back to the sea. He knows better than any one can tell him that as soon as any scales are torn away, that at once a fungus growth will begin to form, which if allowed to grow would in time kill him. There is something in the action of the salt water that will prevent this growth, and allow new scales to form.

But the wisdom and intelligence of the wild creatures is most often seen in their knowledge of poison. The squirrels make a practice of eating fungi, and who told them which are the poison kinds and which not? Many of these growths are so much alike that man is often deceived, even when he has made a study of fungi, but not so the squirrel.

Sheep and cattle will feed in a pasture that abounds with poison plants, yet they do not often get poisoned. Probably each day they feed all about poisonous plants, but they have a God-given instinct that tells them to let it alone. It is probably the same way with the squirrel. I do not imagine that he examines a fungus carefully before he eats it, but if something tells him that it is not well for him to eat a certain fungus he lets it alone.

There is an old proverb that when the cat or the dog eats grass it is going to rain. Now the proverb may mean that, but it means something still more important to pussy or the dog. It means that their system is calling for something green, and that the grass is a simple medicine which will act beneficially upon them.

Notice how pussy will purr and roll about the catnip bed whenever she comes near it. This is the cat cure-all and pussy knows it, and her heart is filled with delight to know there will be a supply for the winter months.

Probably the greatest intelligence shown by any animals in regard to medicine, and particularly poison, is shown by dogs and monkeys.

It says in the Scriptures that even the dogs came and licked the sores of Lazarus, and he could not have had better doctors. There is something in the dog's saliva that is a perfect antiseptic. This means that it cleanses and heals the wound.

A man from Klondyke tells of a dog that ministered so often and so well to his fellow-sufferers that he gained the name of the doctor.

When the dog teams are travelling day after day over the frozen snow and ice their feet get very sore, being scratched and cut by the rough road they have to travel. The harness also sometimes galls them.

Each night, when the harnesses had been taken from the dog-team, and they had been fed their dried fish, the dog called doctor, would go the rounds licking all the sores, bruises and cuts upon his fellow sufferers. Each dog submitted to be licked when his turn came, for he seemed to know he was in the hands of a skillful doctor.

The coffee raisers of South Africa have long been troubled by the gray monkeys that eat the coffee fruit of which the coffee berry is the center.

Finally an attempt was made to poison the marauders with strychnine, which is one of the most deadly poisons.

Many of the monkeys became ill, but all began eating a certain plant which acted as an antidote, making the poison harmless. To those who were too sick to go after the plant, some of the well monkeys brought it, and fed it to them.

The government of this country was so impressed with the remarkable intelligence of the gray monkeys in regard to strychnine that they have appointed a commission to experiment with the monkeys and wrest their secrets from them.

But for the most remarkable demonstration of the animals' knowledge of poison we must return to my old friend, the dog. I have kept the following incident until the last, because to me it is most convincing that there is a God-given instinct in animals that is often much wiser than the intelligence of man.

Dr. Russell H. Conwell, the well-known lecturer and philanthropist of Philadelphia, vouches for the truth of this incident. A Philadelphia minister had a dog which was sick;

several persons saw the dog, and all at once, cried rabies, just as most people do when they do not know what is the matter with the poor canine.

Finally a neighbor, who had more sense than the rest, saw the dog, and at once pronounced it poison.

"Open the door," he said, "and let the dog go, and if there is an antidote for his poison within twenty miles, and he has strength left to reach it, he will find it."

So the door was opened, with much fear and trembling upon the part of the spectators, and the poor dog started, at his best pace, across the lots for the brook, which was a half mile distant.

Arrived at the stream, he plunged in and began eating ravenously of a water plant.

When he had eaten enough, he came out and lay upon the bank and seemed better. By night time he had fully recovered from the effects of the poison.

The minister was so impressed with the cure, that he procured some of the water plant and sent it to Washington to be analyzed.

A few days afterwards Mr. Conwell met his minister friend, who told him that the dog's knowledge of medicine had earned him fifty thousand dollars.

The government at Washington had reported that a very important antidote for poison had been discovered by the poor dog and a large house, manufacturing patent medicine, had bought the dog's secret of his master, paying him a large sum of money.

Thus was the poor brute's instinct again of service to man, putting to shame his science gained through years of study.

In the face of such discoveries, and of the daily and hourly service that the faithful canine gives man, it behooves us not to despise or underestimate even the wisdom of a dog.

X

WHAT THE WOLF CUBS ARE TAUGHT

It is away up in the wilderness of British America and the wildest portions of Canada that the wolf cubs are born, sometimes in April or May.

The wolf is more nearly related to the dog than any other of the wild creatures. Wolves are really wild dogs, and dogs are tamed wolves whom many generations of life with man has greatly changed in their habits of life. It would not take but one or two generations for a dog to return to a wolf. If one was to put a collie pup into the den with a litter of young wolves, the wolf mother would bring him up as her own, and he would be a real wolf when he had grown up.

He would not be quite as large or savage as his brothers and sisters, but he would learn to hunt and take care of himself just like a wolf, and he would resemble them in nearly all particulars.

A collie dog also looks considerably like a wolf. He has the wolf's head and movements.

It is a wonderful day for the little wolf cubs when they are brought forth into the sunlight of the great world. Up to this time they have always lived in the den which was dark and cramped. They did not imagine that there was any such place as the outer world; to them the den was the whole world.

So, is it any wonder that they wink and blink and look about them wonderingly when they first behold the great world? How bright the light must seem to them, and how broad the fields!

For the first day they stay very near to their mother, but they are at once pleased with the world. The air is so fresh and sweet, and there is so much that is strange. Perhaps they have not been out an hour when they are rolling about playing with each other's tails, or maybe nipping and pulling at each other's ears, having the finest frolic that they have ever known. They have not been used to play, for the den was so dark that they did little but eat and sleep.

In two or three days they are stalking grasshoppers and crickets in the grass. Creeping after them as cautiously and excitedly as though they had been much larger game. When the wolf cub gets near enough, he will pounce upon the grasshopper with his paws, and then shove his pointed nose under, to see if he has got him. If he has, the grasshopper makes a dainty bit for the hungry cub. But perhaps the grasshopper flies away just as he is about to seize him, then the wolf has to follow him up again, or find another.

When the young wolves have become good grasshopper hunters, they are taken further into the fields to hunt for mice.

The old wolf will catch the first two or three; so that they can see how it is done. Their sharp noses will soon smell out the runway of the mice under the roots of the grass. The old wolf will show them how to watch for that rustle and wriggle in the grass. Then she will pounce upon the spot and dig the mouse out before he has time to run away.

Catching mice is much harder than catching grasshoppers, but it is such fun for the small wolves, that they want to catch mice all the time once they are shown how, and practice makes perfect, so they soon can catch all the mice they want. This diet may be varied by an occasional frog or crab that they will take from the brook where they go daily for water.

It is a wild, exciting day, and one that they long remember when the young wolves are taken into the cover to hunt rabbits. They soon learn that it is one thing to catch a mouse or a grasshopper, but that it is quite another thing to catch that nimble fellow, the rabbit.

Here they must learn to work together, and to play into each other's hands, or rather mouths. Perhaps one wolf stands hidden by the path where they think the rabbit will run, while the other goes thrashing through the cover, making all the noise he can, so that he finally drives the rabbit right into the mouth of his waiting comrade.

These young wolves, hunting under the guidance of their wary mother, and sometimes assisted by their father, soon become such successful hunters that even the sly and fleet-footed fox does not always escape when they drive the cover for rabbits.

In the early autumn the ducks and geese are flying southward and they will stop at night and sleep upon the sand along the shores of the lonely wilderness lakes. It is while they are peacefully sleeping that the wolves steal upon them. Each wolf gives a sharp snap at one of the long necks, and then they all swing their goose or duck over their shoulders and go away for a fine feast. Hunting in the early summer for the nests of the wild ducks, among the barrens, is also a pleasant pastime of the young wolves' puppyhood.

When the first snow comes the young wolf, who has never seen it before, is probably amazed. How soft and white the world has suddenly become! How silent is his footfall! There is also another queer thing. Wherever he goes he leaves a footprint at every step. So does the rabbit and the fox and the weasel and the squirrel and all the other little furred creatures that the hungry wolf will hunt in winter.

He soon learns to distinguish all these tracks by sight as well as by scent, and to follow them successfully.

It is when the terrible storms come thundering down from the frozen Arctics, and the fields are covered deep with snow, and when it is so cold that the trees are often cracked by the frost, that the wolf is put to his wit's end. Then he has to hunt as he has never hunted before. Then he will do that most dangerous thing of all, go prowling about the houses of men, trying to pick up something that will keep him from starving.

The young wolves have been taught to shun man and to avoid traps, and it is only when the biting cold drives them to it, that they will venture near the abode of this strange and terrible creature whose thunder and lightning is so fatal to even an old strong wolf.

When the most extreme weather of all comes, in early March, and game has become scarce, and they have lost their spare flesh, the wolves follow the trail of the caribou and learn to hunt in packs. Then the wild weird hunting cry of the pack will sound through the snowclad wilderness and all things that hear will shudder and hope that they are not to be hunted that night. The wolves to-day will rarely touch man, whom they have learned to fear and respect.

XI

HOW TO TELL THE BIRDS

The birds are the friends of man. They build their nests near to his abode and they watch his coming and going with much curiousity.

They are interested in all he is doing, so we should be interested in the birds and know them by name.

I am going to give you children an introduction to some of the more common birds, and tell you just a little of their life and habits.

If, some morning about the first of March or perhaps a little later, you are out with your sled sliding on the crust and you hear a sweet little song repeated over and over, "Cheerily, cheerily, cheerily," you may be glad. A little bird friend has come hundreds of miles to tell you that Spring is coming.

At first, you do not see the sweet stranger, but finally you discover him perched upon the

THE BLUEBIRD

topmost twig of elm or maple, pouring forth his glad news. You will notice at once that he is a small bird with a red vest, and a bue jacket. How bright he looks in the morning sunlight and how sweet his simple song is, "Cheerily, cheerily, cheerily."

This is the bluebird, who brings us the news of coming spring.

Some morning, two or three weeks later, when you look out of the window you will see a jaunty bird, hopping about over the brown mowing looking for weed seed, or almost anything that will satisfy a good appetite. He is so pert and saucy that you at once recognize Cock-robin.

Cock-robin always comes north a week or so before Mrs. Robin. Like a good husband he goes ahead to make things easy for his wife.

Perhaps the next bird that you notice as the spring days advance is a modest looking little fellow in a rusty coat. He may be flying about in the wagon shed or perching on the top of a bar-post. If you ask him what his name is, he will reply in the most polite bird language, "Phœbe, Phœbe, Phœbe." This is the Phœbe and a little later he may build a nest in the wagon shed. He is a fly catcher and you will often see him sitting on a limb in a sunny spot watching for flies. When he sees one he will dart out to catch it, and then go back to his perch again.

Next, a gay, light-hearted fellow will come skimming over the fields. He rises and falls in his flight as airy as thistledown and perhaps he is chattering as he comes. If he is not, he soon will be, and he will keep it up all the summer long. This is the barn swallow, and no barn is complete without him. What a pleasant pastime it is to watch him and his fellows on a rainy day in the great barn. How sociable they are and what good times they have, talking about things in birdland!

Some morning about the middle of April when you have gone to the pasture for arbutus you will hear a new note. It is not a song but a far-reaching bugle note: "Honk, honk, honk." You look about in every direction but the right one, and do not discover from whence the sound comes. But look up. Away up in the sky you will see a number of great birds flying in a queer shaped flock. It is just like the letter "V"; don't you recognize it? The point is towards the north and the birds are flying very rapidly. That one at the point of the "V" is an old and wise gander, and he is leading the flock of geese northward. Perhaps they have been flying for five hundred miles, and maybe they will fly as much further before they light. The fastest express train would be left far behind by this wonderful flock of birds.

They will go to far-away Labrador or to Hudson's Bay, where they will raise their young, and in the autumn you will see them all flying back again, but this time the point of the "V" will be towards the south. They are now seeking their winter home in Louisiana.

Perhaps some morning before you get up you are awakened by a great scolding and chattering in the old elm tree in front of the house. You jump up and run to the window, and find that the tree is filled with birds. So many there are that you cannot count them, and each is scolding and squawking away in wheezy notes. They are gaily dressed birds, with purple coats dashed with bottle green, and many other colors that sparkle and glint in the sunlight.

These are the purple grackles, and they have come north in a great flock just as they always do, and have stopped in the old elm, to talk it all over, and argue about what they will do next. They are cousins to the redwings and are a gay and saucy company. They usually build their nests in evergreen trees and stay around all summer.

The oriole and the scarlet tanager are two gaily dressed birds who come north at about the same time. The oriole sings a sweet flute-like song, but the song of the tanager is high-keyed and not as pleasant.

You all know the oriole's nest—that wonderful hanging basket that swings from a limb in the elm? He always fastens it to the limb with a string which it sometimes takes him days to find. You can help him in his nest building, if you will place a good stout string where he can find it at the proper time.

One of the last of our sweet singers to arrive is blithe bobolink, but he makes up for his tardiness by the wonderful song that he pours out as soon as he arrives. You will see him perched on the top of a bush and then you will hear, "spink, spank, spink, tinker tank tink, spinker spank spink, tinker tank tink," repeated over and over. Mr. Bobolink wears a black and white suit, but Mrs. Bobolink dresses in a plain yellowish brown suit.

In the south where the bobolink has his winter home he has a hard time of it. There he is called the rice bird, for he lives on rice during the winter. There men kill him, and make him into a pie, but it is much better to keep him alive and have him sing to you.

There are several birds who will tell you their name even before you ask it. Such is the shy cuckoo, whom you will hear in a treetop saying his own name over and over just before it rains. Sometimes he tries to fool you by simply saying coo, but you will still know that he is the cuckoo.

The quail or Bob-White is another bird who is not afraid to call his name. He too, likes to sing before the coming of rain. You will see him sitting erect upon a bar-post calling in a sweet shrill whistle, "Bob-White, Bob-Bob-White."

There are half a dozen kinds of woodpeckers, all of whom live in a hole in a tree. If you see a bird come out of a hole in a tree it is quite likely a woodpecker. The bluebird frequently uses Mr. and Mrs. Woodpecker's last year's house for her own, but you would never mistake a woodpecker for a bluebird. If you see the woodpecker fly you will notice that he has an up and down motion and you can tell him in that way. Perhaps he will be a large bird with yellow spots on him, then he is called the yellow hammer. If he is a very small woodpecker about five or six inches long, you will know that he is the downy, a very bright interesting little bird. If he has yellow on his breast, you may call him the yellow-bellied sapsucker. This smart woodpecker has discovered the secret of the maple and in the early spring he drills holes in the maple tree, and drinks the sweet sap. Now isn't that clever for a bird?

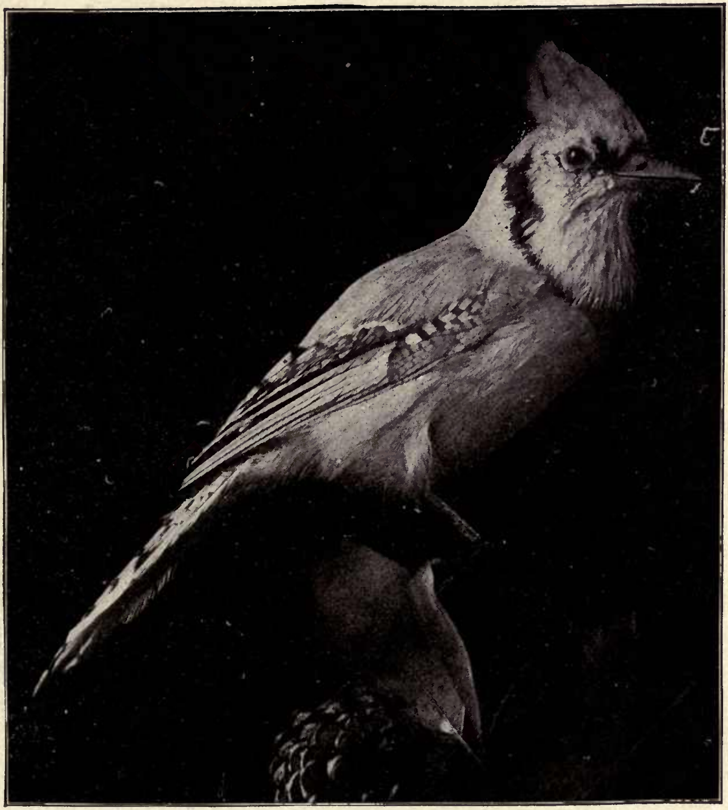
The crow and the jay you will often see in the cornfield, for both consider that a part of what the farmer raises is theirs. The crow is a large, black, sleek fellow, but the blue jay is a noisy saucy bird, very vain of his blue coat.

There are many other kinds of birds that come and go as the seasons change, and all are interesting, some for their dress and some for their song, and some for their queer ways.

Finally when the frosts have killed the flowers and the fields and woods are no longer green and fresh, nearly all of the birds fly away to the south where they live a quiet life waiting for another spring, so that they may again come back to us.

But there are a few that stay with us all through the winter. Such is the chickadee, a very plump pretty little fellow, who is also called the black-capped titmouse, because he wears a black cap. There are other birds who come down to us from the north when the winter is too cold, such as the snowbird and the grosbeak.

You may spend many a pleasant hour watching them through the window if you will put up a box of weed seed or some meat where they can find it.



THE BLUE JAY

At my own home we spread a breakfast table for the birds each morning and sometimes it is so covered with birds that you can hardly see the box. Even a shy old crow occasionally flies up and takes toll from the box.

It is very pleasant to be able to feed the poor birds in the winter when food means so much to them. I often wonder how they can keep their toes warm on cold winter nights. That some of them perish in the driving storm and the bitter cold, we all know. But most of them take care of themselves much better than you or I would out in the cold, and are happy in their own way.

XII

WHAT THE LITTLE BROOK TOLD ME

I am the little brook that comes from far away, through fields and meadows, and under many bridges I travel.

I am more useful than you can possibly imagine.

Where I begin upon a hillside there is a bright and sparkling spring full of pure sweet water. All about the spring are ferns and mosses and the water is as clear as crystal.

Every day some little children come with a pail to get water from this sweet spring. The water in their own wells is bad this summer and if they drink it, it would make them sick, but my water is pure and healthful.

So the first good deed I do is to give water to the little children.

Just a few rods below this spring is a low moist spot and here the ground is covered with violets. So thick they stand that there is hardly room for any more. I call them my violets, for without me to make the spot wet they could not live.

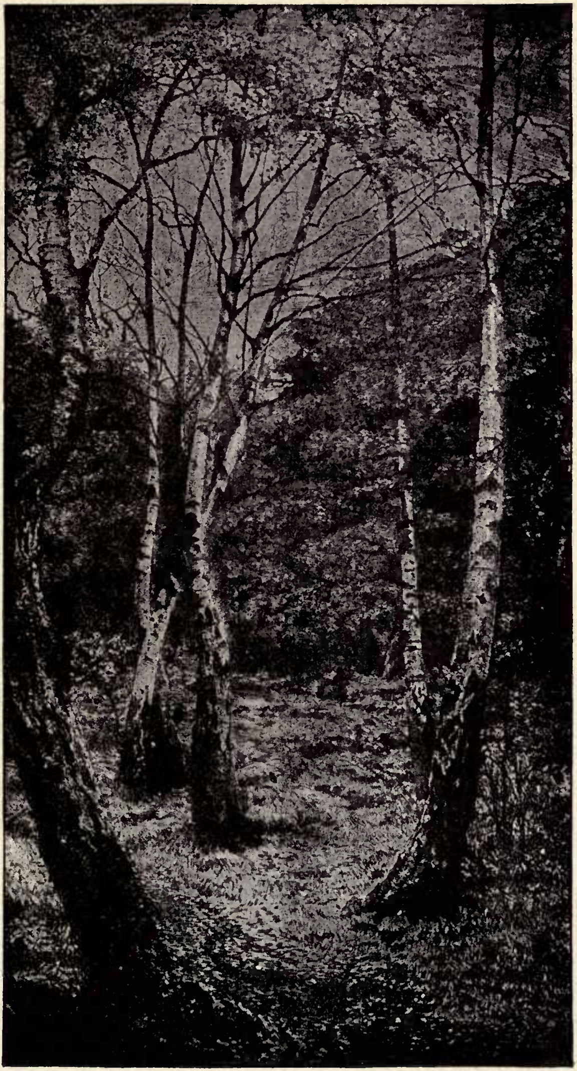
Every day other children come to pick my violets and send them away to little waifs in the city who never see real wild violets growing by the brook.

Further on in this same pasture are cowslips. They hang over my bank and their golden cups are reflected in the water. The cowslips also could not live if I did not give them water to drink, for they are very thirsty flowers.

A poor boy whose mother has to take in washing to pay the rent comes each day to pick my cowslips for their dinner.

The next field that I come to is a meadow, and here the grass stands thick and tall. The farmer says that it is all my work, and that his grass would not be half as good as it is if it were not for me.

The next man whose fields I flow through has made me help him in still another way, for



THE BROOK

he has made a duck pond which I keep filled for him. He has left one little place where I can flow through when I have filled the pond, and for this I am very thankful.

Every day the ducks and geese come down to the pond to swim and to feed on water-grasses.

It is a pretty sight to see a brood of little ducklings or goslings, which are only a day or two old, come toddling down to the pond to swim. They do not have to be taught, but just wade right in and swim the first time. They are as cute as they can be, with their little round downy bodies, their short tails and their tiny red-webbed feet.

When a duck wants to reach some grass that is under water, it just stands upon its head with half its body in the water to reach it. It is not long before these tiny ducklings learn to feed in this way.

After I leave this farmer's field I flow through another meadow. Here there are lots of cattails, and sweet flag. The children come and pick the cattails to put up in the house for ornaments, but the sweet flag root they dig and make into a kind of candy, which is very nice.

Farther on there is a boy who has made a fine dam across my course and put in a water wheel.

I like to rush down his trough and make the little wheel spin round, because it pleases the boy, and it is always good to make people happy.

Next I flow through a large swamp and here there are many pond lilies. How fragrant the air is when these lilies are in bloom! This is about the first of July. The pond lilies also could not live without me, so I call them mine, and when people come and pick them and tell how sweet they are I feel very proud, because I have helped them to grow.

It is not until I have flowed a mile or so, that my first hard task begins. Here men have built a long strong dam and made me work.

When the dam was first built it made me very angry to be held. I knew that the fields and meadows below would miss me if I did not hurry and come to them. It might have taken me a week or two to have filled the dam, but fortunately a hard rain came at just the right time, and the dam was filled in two or three days and I went on my way rejoicing.

But a part of my current always has to flow through a long spout and then make the water-wheel spin round and round before it is free to go on its way.

At first I thought it a great hardship to have to turn the miller's wheel all day long, but finally I understood what good I was doing, and then I was glad. If I worked hard for the miller he could grind the corn and the wheat so that children for many miles around could have food to eat. Further on, there was also another mill which makes cloth to keep people warm, and here I also help.

So you see I am very useful. I water the cattle each day in a hundred pastures, I turn the mill-wheels and make cloth and grind grain. I keep the fields fresh and green and often water the farmer's crops.

I give men and boys fishing and swimming and wading and so help to keep them clean.

As for myself, I am always pure and sweet as a little brook should be, so that people can drink of my sweet water and know that I am good.

XIII

WHAT THE LITTLE FOXES MUST KNOW

If there is an animal in the whole wilderness who lives by his wits, and his wits alone, that animal is the fox.

Any of the rodents or gnawing animals can find natural food almost anywhere, but Reynard, who is a meat eater, must hunt for his living, and sometimes if his hunting was not tempered with the greatest wisdom and cunning, he would go hungry.

The fox is too large to follow his prey into its burrow or other hiding place, as the weasel does, so he must take his game in the open by great cunning and patience.

When the little kit-foxes first waddle out of the den after their mother, they are probably eight or nine weeks old and among the prettiest of the forest babies. They are a reddish yellow, nearly always lighter colored than their mother, with very pointed noses, bright yellow, gleaming eyes, and queer bushy tails.

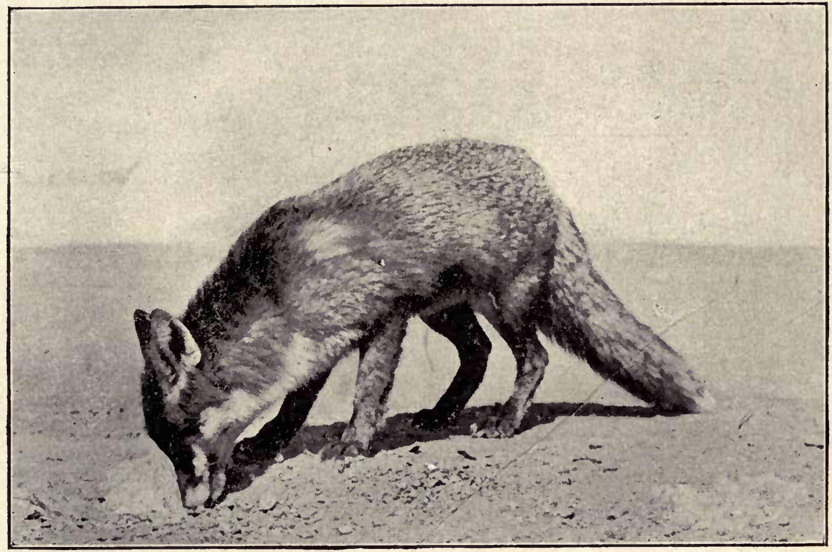
Their actions are in nearly all ways those of a mature fox. If they do not inherit these habits they soon form them by imitating their mother.

They are naturally cunning, alert and quick to learn.

One of the first lessons they are taught is to get to the hole. They will all be playing about just like small puppies, having the finest kind of a time, when their mother will suddenly hurry them into the den most unceremoniously, nipping at them behind and showing her teeth if they do not hurry. This lesson is repeated several times until at the slightest sign from her they will hustle into the den in the liveliest manner.

When this is once learned the little foxes think it great fun and they will scurry into the hole at the top of their speed to see which can be first inside.

Then the mother fox will leave them at the entrance of the den and at play, telling them



THE FOX

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that she is going hunting and that if they hea any noise they must flee into the den with al possible speed. Then she will go a little ways into the bushes, but will soon return unknown to the little foxes and make a slight noise to see if her directions are obeyed. If they all scurry in quickly, all is well, but if any disobey and linger outside to see what the strange noise is, his mother will bound from the bushes and the youngster will wish that he had minded.

The mother fox next seeks to arouse the hunting and killing instinct in the young Reynards, for you must remember that it is by killing that all of the carnivorous or meat-eating animals live.

Perhaps she brings a live mouse for them to torment and kill, but more likely it is a frog. Frogs are easy to catch, and they make a good plaything for young foxes. When they have learned so that they will kill a frog, or a mouse, perhaps they are allowed to hunt grasshoppers or crickets in the grass and weeds near the mouth of the den. These they will creep after in the grass, finally pouncing on them and killing

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them. The young foxes' real hunting does not begin, however, until some moonlight night when they are taken to the meadow and taught to catch mice. Field mice are one of the foxes' chief articles of diet. He can always find them and they are tender and to his liking.

On these bright moonlight nights the mice are running about in their tunnels in the roots of the grass, squeaking and having the finest kind of a time at play. The fox will take his position by the tunnel which he can discern by the smell, and there he will watch, standing as still as a statue for an hour if the mouse does not come his way sooner. Then he will see a little tremor in the grass, and perhaps his quick ears have heard a slight squeak that you or I would not have noticed; then he is all attention. When the movement in the grass gets close enough, he pounces upon the spot and presses the grass down on both sides of the mouse so that he cannot run in either direction. When he digs him out, there is a pitiful little squeak and the mouse has made a beginning for a hungry fox's supper.

When the young foxes have become proficient in mice-catching, they are given something larger to kill.

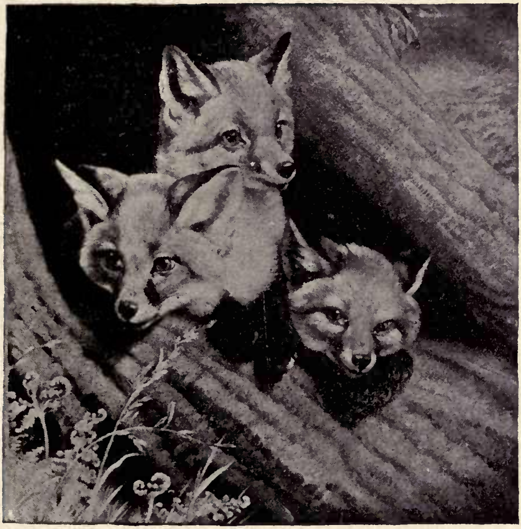
Perhaps the mother or father fox brings home a live woodchuck and calling the young foxes forth from the den they set the woodchuck loose in their midst.

If this is the case, the probability is that some one of the youngsters will get badly bitten before the old woodchuck is killed. But the mother is always standing by, and if the woodchuck proves too much for the whelps, she will step in and finish him, but usually the young foxes will worry the woodchuck and finally kill him.

(If they get bitten they do not mind, for that is a part of the game.)

Next, perhaps, they are set to watch at the entrance of a rabbit burrow or at the foot of a tree where the mother knows that a chipmunk has his winter store laid up.

Maybe some bright night the mother fox goes away leaving the youngsters to hunt mice in the meadows while she tries a more hazardous game. If she is successful, she will return with a hen



LITTLE FOXES

or chicken slung over her shoulder, and the young Reynards will be given a delicious feast.

When the first frosts toughen the young foxes' skins and make them worth the taking, their more serious lessons begin. These that have gone before have been mere play.

Then, if it is possible, the old fox shows the youngsters a trap nicely baited. Probably the young foxes are all eagerness and their tails will wag, and their eyes gleam at the sight of the bait, but the wise old fox drives them away, biting at them savagely and showing them in every possible way that this thing with the metal smell is always to be avoided.

Perhaps some morning when the hoar frost is white on the grass by the brook there comes the baying of a foxhound. Then the wise old fox teaches the youngsters about the chase, and finally tells them that whatever else they do to get away, they must not hole in the home den, which might end in having the whole litter dug out to perish miserably.

Maybe this very morning they hear the roar of the thunderstick, if so, the mother will put her tail between her legs and lead them in a breakneck run out of the country, showing them by her example that this is one of their greatest dangers.

As the season advances, they learn to baffle the hounds, and to play at the desperate game of chance as only a fox can.

XIV

NEST BABIES

Perhaps the most interesting time of the whole year in Bird-land is the time when the fledglings are hatched and the life of the new family begins.

You children could hardly guess, without you have often watched the birds, what patience it has taken to bring this little bird-family into the world.

In the first place it took days to build the nest. Perhaps the first nest was destroyed by the wind or bad boys, so a second may have been built. After the nest was finally built, with much planning by the parent birds, the eggs had to be laid; this usually takes a day for an egg, but some birds skip a day between each egg.

After all the eggs were laid the mother bird

NEST BABIES

had to sit upon them for about three weeks before her patience was rewarded by seeing a small spot pecked in each egg.

Think how hard it would be for you children who like to wriggle about to sit perfectly still, just as the mother bird has to, on the eggs for two or three weeks.

After the fledglings are finally hatched there is great activity in the family for many days. Most of the little birds stay in the nest for several weeks, but little partridges and quail are an exception to this rule, for they are among the brightest and hardiest of chicks, and in a very few hours after being hatched they are picking up their own living just as if they had always worked for it.

But this is not the case with most young birds. Young herons stay in the nest and are fed by the old herons until they are nearly grown.

It is a pleasant sight to see those wide open mouths go up at the slightest sound near the nest. Most of these ugly naked little birds are greedy and take a great deal of feeding. I have seen old robins carrying worms to their young nearly all day long.

Did you ever hear of a fledgling that was hatched in a hole in the ground? Well, that is where the young kingfisher is hatched.

When a pair of kingfishers want to build themselves a nest they dig a hole back into some sandy bank for several feet; and at the end of it they hollow out a round place and line it with fish bones.

Here in darkness the young kingfishers are hatched.

Young kingfishers are among the hungriest of fledglings, and when there is a large family you may see the old birds fishing for these wide-open mouths all day long.

Some birds, like the kingfisher, digest the food for their young before feeding it to them. They first swallow the food themselves, and when it has become soft they gulp it up and feed it to the young birds.

Most little birds when they are first hatched are rather ugly, shapeless little things without any feathers.

Young bluebirds feather out very early, but the queer thing about them is, that they are black as little crows, and it is not until they have been out of the nest for some time that they put on the blue and red of their parents.

The cuckoo also has a queer family of fledglings. This sly bird is very slow about laying her eggs, for she sometimes takes a week to an egg, so that the first cuckoo is hatched out long before his brothers and sisters. So a cuckoo's nest will usually contain birds of several sizes. There will be one little naked cuckoo just hatched, another a week old, and perhaps one just ready to go out into the world and pick up his own living.

There is one bird who is quite shiftless about her young. In fact, she has nothing to do with them after she lays her eggs.

This is the cowbird, who goes about laying her eggs in other birds' nests. When the other birds find a cowbird has laid an egg in their nest they usually hatch it out and take care of the young bird along with their own.

The young cowbird is a greedy fellow, and it greatly surprises its foster mother, who wonders why one of her brood is so greedy and so much larger than the rest of her family.

Most old birds teach their young to fly, showing them by example how the trick is done, and often with holding food to coax them to try their wings.

An old robin will frequently sit upon a limb holding a tempting worm in its bill, while the young robin perches upon a limb near by winking and blinking and wishing so much that he had that worm, but not daring for a long time to fly to his parent and get it.

When the young birds first go forth from the nest is a time of peril to the family, for there is always a chance that some luckless bird will flop down on the grass and the cat will get it. If it is not the cat, sometimes thoughtless children will injure young birds, and some other birds will even kill the fledglings of their neighbors.

Hawks, shrikes, kingbirds, crows and others often rob nests of their young birds and still more frequently steal the eggs before they are hatched. This is very wicked of them, but they do not know better and all of them do it for food, but there is no excuse for the boy or girl who injures young birds or steals birds' eggs.

Once the young birds leave the nest they never return, but are pushed out into the world to shift for themselves.

It is surprising how quickly they learn what things are good for food and which things to let alone. They are never deceived into eating poison foods, as children often are.

Nature has given each young bird such knowledge as he needs to take care of himself in the great world into which he has come. Each bird has in its little head such wisdom as will enable it to build its nest and rear its young when the time comes. Also there is a thought in the bird's head that will lead him many miles away, when the cold comes, to warmer climes, where he will not perish from the cold.

The little bird loves the sunshine and the warmth and plenty of good things to eat. When he has all these things, what a pleasant companion for man he is! How his song gladdens the earth, and how his bright feathers cheer us as they flash by!

Let us then feed and protect these little friends and encourage them to build about our houses, for it is a great thing to have the full confidence of even a little bird.

XV

SOME BIRD-LAND ROMANCES

Little Stout-heart and Mr. Fine-feathers both came to my home the same day. If I remember rightly it was the seventh of May.

They were two male Baltimore orioles, and I noticed at once that there was some kind of rivalry between them. This was explained three or four days later when a dainty female Baltimore oriole appeared and the two male birds began making love to her at the same time.

It was the old, old story of rival suitors. Probably both had begun courtship several days before in the sunny south, and the wayward lady bird had not been able to make up her mind. So finally the lovers had gone north to search for summer quarters, and the thing had not been settled. There had probably been scrapping about it all the way from Maryland to

THE BALTIMORE ORIOLE

Massachusetts, but all of the oriole's battles are bloodless, and merely consist of bluster and scolding, with an occasional feeble attempt at real fighting.

It was impossible for me to tell which of the suitors the female oriole favored. But I ought not to be expected to know the mind of a bird who did not know her own.

Little Stout-heart was the most attentive, but Mr. Fine-feathers was a wonderfully brilliant bird and a fine singer, and I saw plainly that the coquettish oriole was attracted by his fine feathers.

There is no doubt that his plumage would have won the day, just as fine feathers often do, had not something happened that quite changed things. I think that it was about as good as settled, for Mrs.Oriole had begun her nest while Mr. Fine-feathers was singing triumphantly, but poor little Stout-heart fluttered about sad and uncertain.

Finally, in the course of the nest building Mrs. Oriole discovered a fine string that she at once saw was just the thing with which to hang the nest to a limb in the old elm. She was so pleased and excited that she did not notice my telephone wire and so flew against it, while carrying the long string in her bill.

She hovered a moment in midair as though trying to regain her senses, and then fluttered down to earth.

I saw the accident and was about to go to her assistance when, quick as a flash, that ruthless hunter, the house cat, pounced upon her.

I cried out for pussy to desist, but a cat rarely gives up anything that it has once gotten its jaws upon and in another minute Mrs. Oriole's fate would have been sealed, had not a valiant little knight-errant flown to the rescue.

There was a flash like a golden sunbeam falling through the leaves and little Stout-heart was darting viciously at the cat's eyes, pecking and striking with his wings more savagely than I had imagined that an oriole could strike.

Pussy's astonishment was probably as great as mine, for she loosed her hold for a second upon her victim and in that instant the prisoner escaped, and both she and her deliverer flew up into the old elm far out of the cat's reach.

When it was all over, Mr. Fine-feathers came fluttering about pouring out glad notes, but his wife would have nothing to do with him. Together she and Stout-heart set upon Fine-feathers and drove him away from the premises, and I did not see him again that morning.

This act of heroism upon the part of little Stout-heart, won the female oriole's heart for him and he and she reared their young and were happy after their kind.

Mr. Fine-feathers stayed about for a few days, but finally seeing that he had lost his wife for good, sought a new mate elsewhere.

The same Spring, a few days later, Sir Cuckoo came to the old butternut tree in the front yard to eat hairy caterpillars.

The cuckoo is a rather shy bird, so that although you may hear his plaintive cuckoo over and over, again and again, still you rarely see him.

For an hour or two he amused himself eating the caterpillars just as a well-behaved cuckoo should, but finally caught sight of a robin's nest in a nearby apple-tree and then a very wicked thought came into his head.

"Why should I spend my whole life eating caterpillars?" he thought; "especially the hairy kind that other birds will hardly touch? It is all right to be a benefit to man, and help him by eating up these miserable old caterpillars, but I want something different."

Sir Cuckoo had seen a crow robbing a bird's nest a day or two before, and he thought it great fun to hear the old birds' frightened and angry cries. To be sure, he did tremble for a moment for his own nest, but he did not think the crow would find it.

Sir Cuckoo wondered what was in the robin's nest in the apple-tree nearby, so he flew over to see.

Neither of the birds were at home, and the nest contained five eggs, as blue as heaven, and much handsomer than Mrs. Cuckoo's eggs.

Sir Cuckoo perched upon the edge of the nest and for a moment amused himself by turning the eggs over with his bill and then he struck one of them a sharp rap and pierced the shell.

Then he deliberately sucked out the inside, and dropped the empty shell upon the ground.

It was fine, much better than caterpillars, so he ate the second egg and its shell followed the first. He was just finishing the third when there came a chorus of angry cries, and before Sir Cuckoo knew it, both of the robins were upon him.

Before he had time to flee Mr. Robin had alighted upon his back and was beating away at the back of his head, and Mrs. Robin was pecking at his eyes with might and main.

Fluttering, striking, squeaking and squawling, all three went down upon the ground.

The robins were plainly too much for Sir Cuckoo. But since he had been caught fairly, with the plunder in his mouth, I did not feel justified in taking his part. He must suffer the consequences of his sin whatever they might be.

In thirty seconds' time the two robins had so beaten and pecked the thief that he lay motionless on the ground. When they had satisfied themselves that he could no longer flutter, they flew up to the nearly empty nest, making a great ado about their loss.

I went out and picked up the motionless cuckoo

THE ROBIN

and to my great astonishment found that he was quite dead.

Down in the swamp, in an alder thicket, perched the nine-killer, or butcher-bird, watching and waiting for prey.

A few rods away was a thorn-apple bush upon which he had already impaled two forest warblers this morning.

He was not a large bird, about the size of a robin. He was slate-colored above, and rather lighter below, with black wings which were conspicuous when he flew. His beak was sharp and hooked and his talons were hooked and strong, much like those of the sparrow hawk.

Of all birds of prey, he is the most cruel and persistent in his hunting. His name of nine-killer is given him because he usually catches nine small birds and impales them upon some thorn bush, or barbed wire fence, much as the barbarians of old did with their prisoners of war.

Occasionally this merciless hunter would give slight bird notes imitating as well as he could the notes of small birds, so that his prey might think that the bush was inhabited by some of their kind and be trapped to doom.

He had been sitting quietly for some time, when along came a slight grasshopper sparrow. Ah, here is a titbit, thought the nine-killer and he waited until the sparrow was close by his place of hiding and then darted out at him.

There was a quick series of frightened twitters and the butcher-bird wrapped his strong claws about the sparrow and flew away with him to the thorn bush.

He was so excited with his own game that he did not notice a swift shadow that followed him, or the steely-blue bird that flew just above him.

As he slackened his pace and hovered above the thorn bush preparing to spear his victim, there was a flutter of wings above him and a set of claws, stronger and sharper than his own, gripped him.

With a cry of alarm he loosed his hold upon the grasshopper sparrow, which flew quickly away, but the nine-killer's fate was sealed, for the talons of pigeon hawk were buried deep in his neck and they did not lose their grip until life had left him.

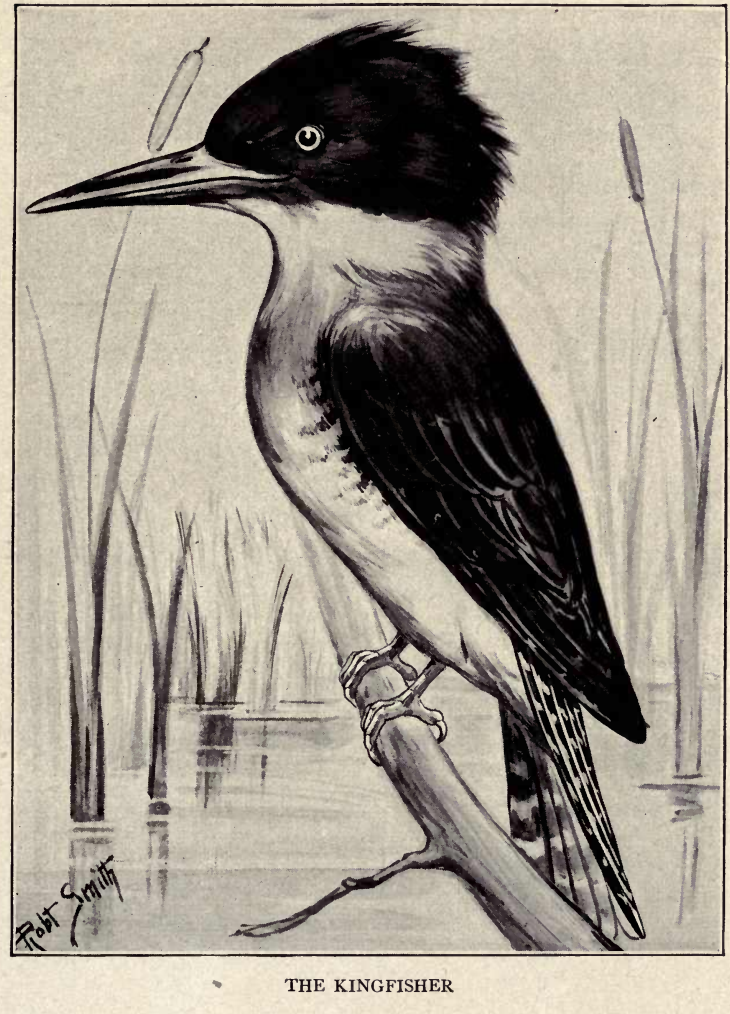
XVI

FURRED AND FEATHERED FISHERMEN

If the boy who loves to take his trout pole and follow the brook for trout, imagines that he is the only fisherman in the world, he is quite mistaken. Man is not the only fisherman, for there are innumerable birds and animals that are nearly, if not quite, as good fishermen as he.

Even upon the little brook that the boy calls his very own, he is not the only fisherman. Do you not know the kingfisher — that queer bird who builds his nest in a hole in the bank? He too is a fisherman. Some day you will see him sitting upon a limb of a tree that overhangs the water. He is watching the stream intently. He sits as still as though he were a wooden bird, but he is very much alive, as you will presently see.

Soon a minnow will come swimming leisurely along. Flash! The kingfisher falls like a blue



THE KINGFISHER

streak and goes under the water with a great splash. If he is successful you will see a minnow in his beak, when he comes up, but it will not be there long, for he will swallow it before you know where it has gone. Then he will go back upon the same limb and watch for another fish.

On the larger streams you will see the osprey, who is the American fishhawk, catching fish. The osprey is a fine majestic bird, looking something like a very large hen hawk. You will see him flying leisurely along over the lake, when suddenly he will stop in mid air, giving just motion enough to his wings to keep his balance. A moment he will hang there in the air, and then he will fall like a thunderbolt. He will go under the water out of sight and if he is successful a fish will be dangling from his claws when he appears. He catches his fish in his talons, while the kingfisher catches his in his beak.

Another fisherman is the great American blue heron. A tall, queer-looking bird, who has such long legs that he looks as though he were on stilts. You will see him walking gravely along the banks of the pond or stream. He will use great caution, taking up his foot and putting it down noiselessly, for he does not wish to frighten his fish. When he reaches a position where he thinks the fish are likely to swim he will stand perfectly still, his head drawn back between his shoulders in readiness to strike. He will often stand in one position for half an hour. By and by his patience will be rewarded, and his head will shoot out like a flash, and he will bring it up with a perch firmly speared on his long beak.

The blue heron is also a great frog catcher. When he has caught half a dozen frogs he will lay them down upon the grass with their legs crossing. Then he will bite upon the place where they cross and in this way hold them all, when he will fly away with frogs dangling from both sides of his beak.

But there are also animals who are as good fishermen as the birds. The very best of all these is the otter. This animal is so good a fisherman that in China he is trained to fish for his master, after being caught and tamed.

The otter is a long, sleek animal weighing about forty pounds. His coat is smooth and very warm, and is highly prized as fur.

The otter slips quietly into the water, never making a splash to frighten his fish, or maybe, he will lie upon a rock in the middle of the stream. When he at last sees the fish that he wants, he starts after it like a black streak. The otter is the swiftest swimmer of all quadrupeds, and it is rarely that a fish can escape him. If the fish can get under a rock, or into some small hole, perhaps he may get away, but if it cannot find a hiding place it will be caught.

There are other four-footed fishermen, but most of them fish by stealth, and do not try to beat the fish at its own game as the otter does.

The raccoon is a good fisherman, and you will see him on a moonlight night, bending patiently over some pool in the brook watching with eager eyes. When a sucker or perch comes his way his paw will shoot out like a flash, and, if he is successful, the fish will land upon the bank, when he will pounce upon it.

The raccoon is really a little brother to the bear. He walks and acts like a bear, and he sleeps in the winter just as the bear does. So you will not be surprised when I tell you that the bear is a fisherman too.

It is not an uncommon sight to see Bruin up in the great woods of Canada bending above a pool watching intently for trout. You would hardly think that he could catch a fish, but wait until a grasshopper falls upon the surface of the water near the bear and a trout rises to catch it. The great bear's paw will shoot out and a trout, that any fisherman might envy him, will fly into the bushes.

The wildcat and the lynx, two great cats found in the northern wilderness, are also good fishermen, taking their fish just as Bruin does. All of the cat tribe dislike to wet their feet and if any of the great cats had to go into the water for fish they would go without it. The mink destroys more fish than he cares to eat, for he is small and stealthy and can swim like a snake.

So you see the boy is not the only fisherman in the world. Many of the furred and feathered folks take fish, and some of them do it very cleverly.

XVII

HOW THE BIRDS HELP THE FARMER

I am sure that it will surprise my little readers to know that such small creatures as the birds are a help to the farmer, but this is the case.

Perhaps you thought that the birds were only pleasing as songsters to cheer us with their glad music and bright colors, but they are most useful as well.

In the town where I live the elm beetle and the gypsy moth have been making sad ravages upon the grand old elms that line the street.

Many of these elms are over two hundred years old. They were planted by our ancestors and so are very precious. During the month of July men went up and down through the street showering poison upon the trees with a machine, that the small beetles and moths might eat it and be killed.

But these men were not the first destroyers of the pests in the field, for the latter part of April, even before the leaves were out, an army of birds were hard at work destroying the enemies of the trees.

There were robins and bluebirds, nuthatches and chick-a-dees, song sparrows and Phœbes, all working with might and main. Even the noisy, quarrelsome English sparrow joined in the hunt. All were chirping away gleefully.

Some of the birds were so expert that they could catch the moths and beetles on the wing. As they chirruped and chattered, squeaked and twittered, I could imagine them saying, "Look out, there he goes. Catch him quick. Well, I have got this one," and so on.

Just in front of my house is an old butternut tree in which the hairy caterpillars have made sad work. Quite frequently in the summer we will hear the plaintive note of the cuckoo in the tree nearly all day long. I might wonder what he was doing there for so long a time if I did not know that he was busy eating the hairy caterpillar.

This is the worst of all the caterpillars that do damage among our trees, and the cuckoo is the only bird that can eat him.

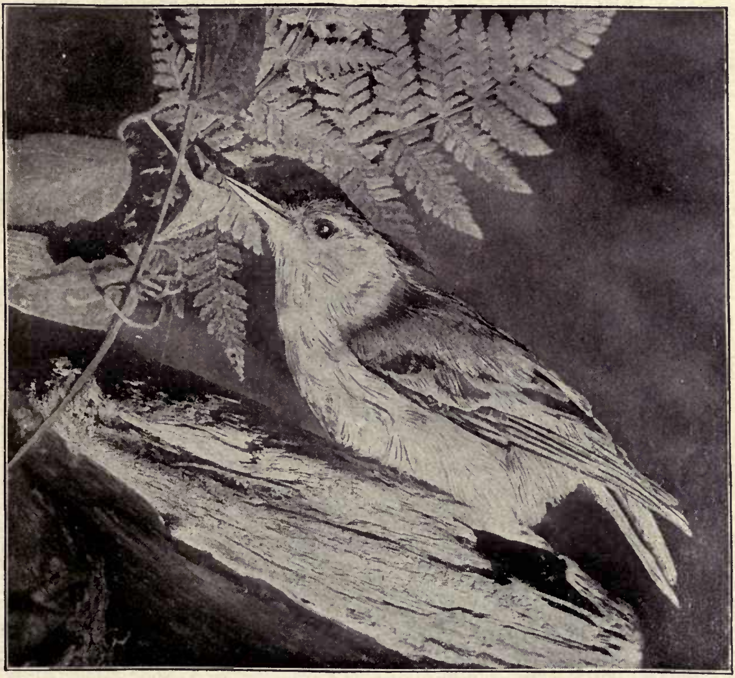
This destructive pest is covered with short bristly hairs and the poor cuckoo gets his stomach filled with them. Sometimes when one is killed and his stomach is examined it is found to be stuck full of these sharp caterpillar hairs.

If you will examine the bark of any tree that is partly dead, you will find that it is full of small holes. This is the work of the destructive borer who goes up and down boring holes not only in the bark of the tree, but also in the wood.

There are a lot of birds called creepers which were made on purpose to destroy the borer, I imagine. These birds are the woodpeckers, the nuthatch, the brown creepers, the ruby crested kinglet, and several others.

You may see them almost any day going up and down upon the trunk and limbs of a tree looking for borers. All of these birds have sharp bills that they may pierce through the bark and drill deep.

One of these birds may even be seen hanging head down upon the bark of the tree. This



THE WHITE-BREASTED NUTHATCH

is the nuthatch. If the bird goes around and around the tree spirally it is the brown creeper.

In the winter-time after each snow you will find if you visit the deep woods that it is alive with chick-a-dees. They were not there yesterday and they may be gone to-morrow, but to-day they are all busy catching the aphis, or bark louse. You will notice if you look, that the bark on nearly all the trees is fairly alive with these tiny creatures, but the army of chick-a-dees is after them. If the chick-a-dee should disappear, our forests would at once suffer.

In apple growing countries each spring men go about in the orchards with a spraying machine upon a large wagon, spraying poison upon the trees, that they may kill the pests that would destroy the fruit. But men are not alone in their fight against the pests, for an army of birds are also helping.

This army consists of half a dozen different kinds of fly catchers, half a dozen creepers, and a dozen or more different varieties of song birds. All are chirping and twittering away with might and main and catching beetles, caterpillars, and moths for dear life.

Another great benefit that the birds are to the farmer is seen in the work they do destroying weed seed, for you must remember that many birds live partly upon weed seed.

Each autumn, when the grain has been cut and stacked, Mrs. Bob White leads her large family, of ten or fifteen nearly grown chicks, down into the grainfields. To be sure they eat some grain, but this is compensated for ten times over by the weed seed that they destroy. All day long they will be seen pecking and scratching. They pick up seed from the obnoxious pigweed, goldenrod, wild turnip, and a score of other bad weeds which are the poor farmer's nightmare for the crop season.

Every night when this interesting bird family goes to sleep under some bush or fence, each of the dozen or more crops is fairly bursting with weed seed. Some of these crops have been known to contain thousands of seeds.

So you can readily see what just one family of quail can do for the farmer in a single day.

The government officials have estimated that the Bob White, in Maryland and Virginia, each year pick up two hundred and forty tons of weed seed.

What the easy-going farmers of those two states would do without the quail is a question.

Even the noisy quarrelsome sparrow, whom all condemn because he drives out other birds that we like better, has been known to do great good in this manner. It has been estimated that each year in the state of Iowa, this noisy disagreeable fellow eats and thus destroys many train loads of weed seed, saving the farmer a very large sum of money.

Everything that God has made has its place and does an important part of the world's work. At the first thought, you would not think that a poor angle-worm could be of service, except to put upon a hook, but he is also a help to the farmer. Turn over a spadeful of dirt and, if the soil is rich, you will find a half dozen of these wrigglers.

What have they been doing in the dirt? Examine it carefully and you will see that it is full of small holes where they have been crawling in and out. Thus they have kept it mellow, and suitable for crops to grow in.

This is the work of the angle-worm, or dirt worm, to knead the ground. He even goes so far as to eat the soil, that he may keep it mellow. Dirt, where there are no angle-worms, is hard and unproductive.

Even the poor despised skunk is the farmer's helper, for he will go up and down through the crops picking off slugs all night long.

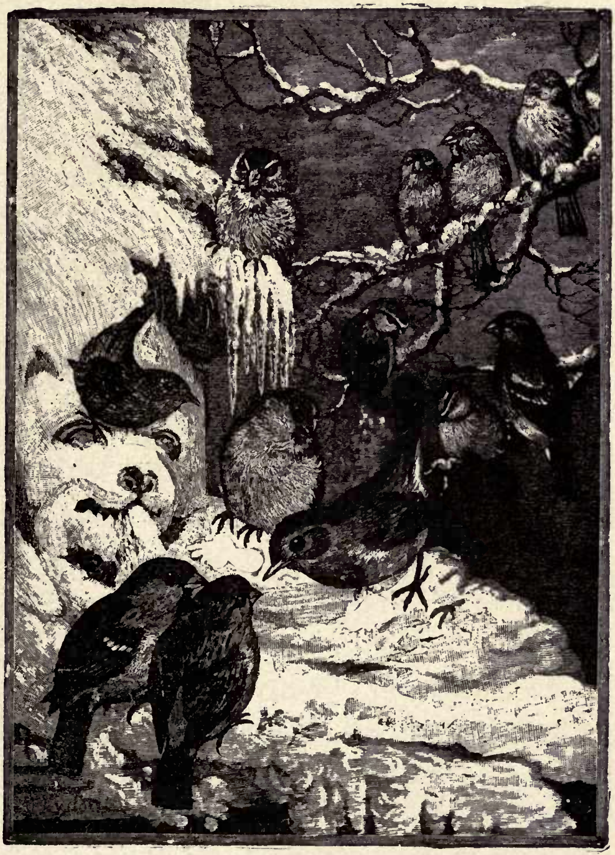
XVIII

WHAT THE LITTLE FURRED AND FEATHERED FOLKS DO IN WINTER

When you children are tucked in your warm beds in winter, while the winds howl outside, and the snow or sleet drives against the window pane, do you not often wonder what the little furred and feathered folks are doing on such terrible nights?

This is a problem that used to worry me considerably when I was a boy, and it still does when I know that nuts and buds are scarce and the winter uncommonly cold.

But these little folks take care of themselves much better than one would imagine. Most of the woodpeckers are still with us and you will hear them on warm days sounding their



BIRDS IN WINTER

rat-a-tat-tat on a dead limb, or see them galloping over the frozen fields.

When the woodpecker intends to winter here, he begins making new quarters early in the autumn. You may hear him pounding away for several days, if his winter house is near your own.

He builds this house much as he does the spring nest, making a round hole running back into the trunk of the tree for a few inches, and then running it down a ways. At the bottom he lines it nicely and there he sleeps away most of the cold winter, only coming out for food once or twice a day.

Of the other birds, we see much of the chick-a-dee and the snowbird, but they are regular winter friends. The snowbird is used to living away up in the frozen North, and he likes the cold and the storm. What tales he could tell us, if he had a mind to, of the blue fox and the musk ox, and all the other Arctic animals.

All of the squirrels are sleeping away the cold winter. The chipmunk has laid up a fine store of nuts under the root of the old pine, and he will not come out all winter long. The chances are that he will still have nuts left in the spring, for he is a provident little chap.

The gray squirrel also sleeps all through the winter, only waking up now and then to take a nibble at his stores. But the red squirrel does not store up as large a supply as his cousins. He is a rattle-brained fellow and he scatters his winter supply about in half a dozen places. Often you will see him out in the winter looking for some one of his half dozen granaries. Sometimes he forgets where he has made his pantry and has to go hungry.

Often the gray squirrel sleeps in a hollow tree, and sometimes he makes himself a fine hammock in the top. This is made by placing sticks crosswise in a crotch of the tree, and then by filling in leaves to make a nest. When the house is done Mr. Squirrel crawls into the middle of this nest, and lets the wind rock him all the winter long.

The rabbit does not care much how cold it is. The winter is his play time and he likes it. His coat is warm and thick and just the color of the snow, so that his many enemies cannot see him.

If he can manage to dodge the owl, the fox, the weasel, the wildcat and other of his enemies, he has a fine time in the winter.

One of his chief amusements is to play tag on a moonlight night. Then sometimes in the depths of the deep laurel swamp there will be dozens of the white nimble creatures all playing tag.

As the rabbit is a vegetarian, living on bark, he can always find plenty of food in the winter.

The partridge too is a vegetarian, in winter time living on buds, but he is often rather cold, for he is not quite as well clad as is the rabbit.

If the night is not too cold the partridge roosts in a fir tree where the thick boughs shield him, but if it is very cold and windy the partridge dives under the snow and sleeps in a white, soft bed until the morning comes.

Sometimes a strange thing happens to the poor partridge while he is sleeping in his snow-bed. Perhaps there will be a rain storm, and the snow will crust over, so in the morning he will be a prisoner under the snow. Then if he cannot break through he will starve.

I am afraid that the fox, as witty as he is, sometimes goes hungry in the winter. When there is no snow on the ground he depends to a great degree on mice for his food, but now the mice are all safe, so he must sharpen his wits and catch a partridge or rabbit, or he will even visit the chicken coop if he gets too hungry.

Down in the deep woods the raccoon is sleeping soundly in a hollow tree. The raccoon is a real little brother to the bear. He walks like a bear and he has the same droll countenance.

All through the winter months he sleeps just as the bear does, living on the fat that he stored up in the autumn when food was plenty.

The little furred and feathered creatures often come close to the house in winter and you children can have fun feeding them and watching them come and go.

Here is a list of the friends that you may make if you will be generous with your crumbs and occasionally a bit of grain in the winter.

The snowbird and the chick-a-dee will flock to your window sill and may even be coaxed into the house if you wish. The jay and the grosbeak will come to the shed, and crows, owls, and woodpeckers will also partake of your bounty in a wary manner.

The red squirrel is always on hand to get his share, once he has found you out, and when it is very warm the grayer may wake up for a few hours and come and see you.

There is nothing more pleasant as the winter days go by, than seeing these little friends come and go, and there is keen satisfaction in knowing that you have helped them to brave the stern winter and perhaps given them a breakfast or supper when otherwise they would have gone hungry.

XIX

BIRDS AND ANIMALS THAT ENJOY SOCIETY

One has merely to watch a pair of house-hunting bluebirds as they flit from point to point, peeping into all sorts of holes for a suitable place to build their nest, to be convinced that birds enjoy one another's company. But these are mating birds, and, in this story I am going to tell you how the birds and animals like to go together in large companies, ranging all the way from a family of three or four members to a flock or herd of many hundred members.

If you ever have the good fortune to watch a family of kingfishers on the first day that they come forth to learn to fish, you will see a very noisy, jolly family. To be sure, there is some scrapping among them, but there is also much good comradeship, and the best of sport and rivalry in learning to fish.

A litter of young foxes will play together rolling and snapping like puppies. They will chase a leaf that the wind whisks by and show as much zest in their play as kittens. When the first snow comes, the fox and geese track that they will mark out, would make a boy dizzy.

A family of young minks will play like kittens, racing up and down the brook upon the stones, and swimming in the deep pools.

The bird families are usually larger than those of the quadrupeds. A bevy of young partridges will hold together until the fall madness afflicts them in November, when they scatter and each shifts for himself.

Did you ever imagine when a flock of snowbirds flash by that this flock is merely a snowbird family, or perhaps two broods of snowbirds?

A small flock of wild geese of ten or a dozen birds is merely a nice family party. You will see the old gander, who is the father, flying at the point of the wedge, and leading the party.

When the flock of geese is very large it is several families gathered together. This is probably all the birds that nested about a certain Canadian lake. It might be called a bird village going south.

The blackbirds also go in large companies and often five hundred or a thousand birds will go chattering and scolding by, fairly making the air black and deafening one with their chatter.

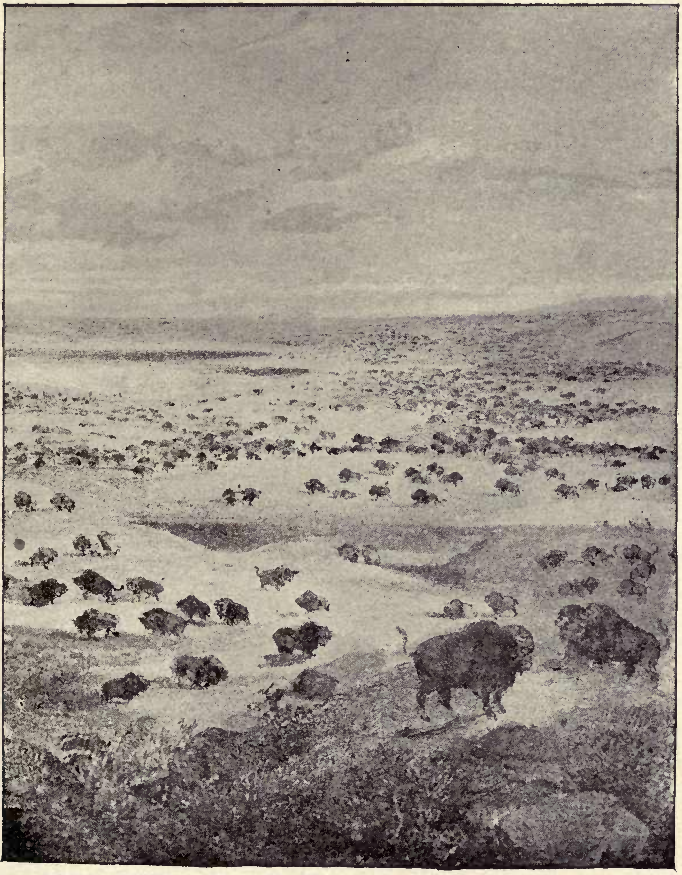
Years and years ago, when our grandfathers were boys, great flocks of wood pigeons went over each spring. Some of these flocks were so large that they shut out the sunlight sometimes for even an hour. But the poor wood pigeon was caught in great numbers in nets and made into pigeon pies, so that now it is no longer seen.

Still more interesting than the flocks of birds are the herds of the deer family. Each year, early in December, when the deep snows begin to fall, the great bull moose who is leading the herd will select a place for the winter yard. The moose and the other members of the deer family cannot get about in very deep snow, so they select a spot where there is much birch and maple browse, and some good live springs of water. Then they mark out paths in and out through their domain, until it looks like an enormous fox and geese track. After each snow they will run about in the different paths treading it down, so that they will still be able to get about.

As the snows get deeper and deeper the deer are able to keep fewer and fewer paths open until March comes, when the yard may not be even half as large as it was first planned. By this time, all the small branches upon the birches and maples and many other trees have been eaten by the hungry moose.

Deer yard in the same manner. Within a few miles of my own home I know where several such yards are made each winter.

Forty or fifty years ago the great western plains were covered with bison. These animals, which are the largest wild animals on this continent, went in herds of many tens of thousands. Each spring there was a great stampede of the main herd from the south to the north, and each fall they moved back south again. Sometimes the prairies would be covered with these enormous creatures as far as the eye could reach. The great bulls running in front, and the cows and calves coming behind.



A HERD OF BISON

The rumble of their hoofs was like heavy thunder, and when they travelled in large companies the prairies trembled. Often the Indians would follow them for days shooting and killing many for their winter's supply of meat, and for the warm skins.

But now the splendid herds have all disappeared, and there are only about two thousand buffalo in the whole country.

The restless caribou, one of whose Indian names signifies the wanderer, also goes in great herds, and moves from north to south, and from south to north, as the seasons change. Their object in doing this is to go where they can still get at the grass and moss and small twigs for browse.

Old hunters say that it is a majestic sight to see a thousand or ten thousand caribou moving across the country at that easy, steady trot, their hoofs clicking and their horns rattling together like mighty castanets.

Wolves also like the company of their fellows and often go in packs, especially in winters when the hunting is poor. At such times the long, wailing hunting cry of the gray wolf is a sound to send a shiver to the hearts of the bravest of the forest denizens.

While hunting in packs they can attack and pull down game that one wolf would never think of attacking alone. In this manner they will hunt deer and moose and the story of many a bloody battle can often be read on the snow.

They do not often attack the moose in the open, for he is a mighty creature dealing death with both his antlers and his sharp hoofs, but if he gets mired in the spring mud, or is disabled, they are upon him and soon worry out his strong life.

The coyote, who is the small prairie wolf, also sometimes goes in packs, but he is a sneaking little wolf and about the worst thing he does is to make night hideous with his unearthly cries.

Perhaps the most interesting of all wild creatures that gather together for company and protection are the villages of prairie dogs. These strange little creatures will often fairly honeycomb a side hill and dozens of them can frequently be seen sitting upon their haunches at the entrance of their holes. But let a gun flash from a nearby hilltop and, as though by magic, all will disappear. It is even said that, like the dipper duck, they are quicker than the hunter's bullet.

You will at once see, little reader, from what I have told you of families, flocks, herds and packs, that the wild creatures often join together in large numbers for company and protection, and I am sure that many of them are also social and enjoy the company of their fellows.

XX

STORIES IN THE SNOW

When nature has spread a soft white blanket over the fields and the evergreen trees are gowned with new snow, then the fields and woods are like a great book that one can read as easily as he can the printed page if he knows the alphabet of the forest.

Some of the simplest stories that one may read in the snow I am going to tell you, and you can see for yourself that they are most interesting.

Now that the ground is covered with snow, the fox and the rabbit and the squirrel and the weasel cannot any of them stir abroad without telling all who pass their way, where they have been, and what they have been doing.

If you see a track with four paw prints in a bunch, the two back ones spread out, and the two forward prints following after each other, so that the whole track is fan shaped, you may know that a rabbit has been along. If the tracks are far apart he was going with long jumps, and in a great hurry about something, but if they are near together he was taking his time, and was probably out for his health.

You will notice two sizes of rabbit tracks. The larger are made by the white rabbit, and the smaller by the little gray rabbit.

Sometimes you will see the tracks of one or more dogs following along beside the rabbit track, and then you may know that the rabbit was running for his life and that the hounds were after him. If there is a single track following the rabbit track, and it looks like a dog's track, only it is smaller, you will know that sly Reynard, the red fox, is following the rabbit in hopes of overtaking him at the rubbing tree or while he is feeding or playing, and catching him. The fox is very hungry these cold winter days, and has to sharpen his wits and hunt continually to keep from starving.

Here is a fox track. Let us follow it and see what Reynard is doing to-night. Down into the meadow it leads us. If it were summer time

we would think that the fox was going to hunt mice. Here and there he has stopped at a bush or stump, smelling about to see what he could discover. Here, he has dug under this old log, and there is some crisp last year's grass scattered about on the snow.

Pick up the grass and smell of it. It came from a field mouse's nest, there is no doubt of it, and the sly fox has dug the little fellow out, even though he was well protected by the snow.

In another place we can see where Reynard has dug for a long time at the foot of a tree. What could he be after here—another mouse?

No, this time I imagine he spied out the chipmunk's hole and thought to dig him out, but the frozen ground was too hard and he had to give it up.

Under a little scrub spruce are some partridge tracks. They look just like the tracks the hens make about the house after a new snow-storm. Here is a great blurr in the snow where the partridge dove under and spent the night. On very cold nights the partridges bury themselves in the snow to get warm, and the foxes go about trying to find where they are hidden, that they may dig them out and eat them. Mr. Fox did not get this partridge, for there are no blood spots or feathers on the snow.

If Mr. Fox does not find his supper elsewhere he will go into the swamp and try to catch a rabbit. He may sit for hours by the rabbit's road which is well trodden and where he knows they are likely to pass. If he cannot get a rabbit in this manner, which is called the still hunt, he will go creeping carefully through the swamp trying to catch one while he is at play. The rabbits are very playful and they love dearly to play tag in the moonlight. Frequently you will see where they have been playing and the snow will be tracked in every direction.

A rabbit swamp is a very interesting place in midwinter, and there are many thrilling stories to be read there after each new snow. Through the middle of the swamp are well trodden rabbit roads or streets, with side streets branching off in every direction. Each one of these leads up to a bunny's front door, if you could only search it out. These streets are made very crooked, and even the cunning fox cannot always puzzle them out.

Once in a while you will see where the poor cotton-tail ran at the top of his speed, jumping first this way and then that. There is no fox track following his, and no weasels either. The rabbit is quite as much afraid of the weasel as he is the fox and he will sometimes lie right down in the snow and be killed when he sees the weasel following him. This time there is no weasel track, but the poor rabbit seems to be greatly alarmed. Suddenly his tracks disappear, and you wonder where he could have gone to. Did he take wings to himself and fly away?

Not quite that, but something almost like it. See, here by his last jump there is a blurr in the snow. That was made by great wings.

Poor little bunny! It was a great hungry owl that spied him at play and swooped down upon him. He only had time to make a few frightened jumps before he was caught.

But only a few of the rabbits get caught, when we consider all that there are, and the rest have a fine time.

Whenever Mr. Skunk stirs abroad he leaves the queerest kind of a track which you cannot fail to tell. The skunk's legs are so short that his belly drags in the snow, so that his track is just a long furrow. Mr. Skunk does not stir out except on warm days, for he is well protected by his fat and prefers to sleep away most of the winter, just as the woodchuck does.

The prettiest little track of all is made by either the field or wood mouse. It is so tiny that it looks like lace work. But these little mice are very thrifty; they have good stores laid up against the cold winter months and they simply come out to see how the winter is going.

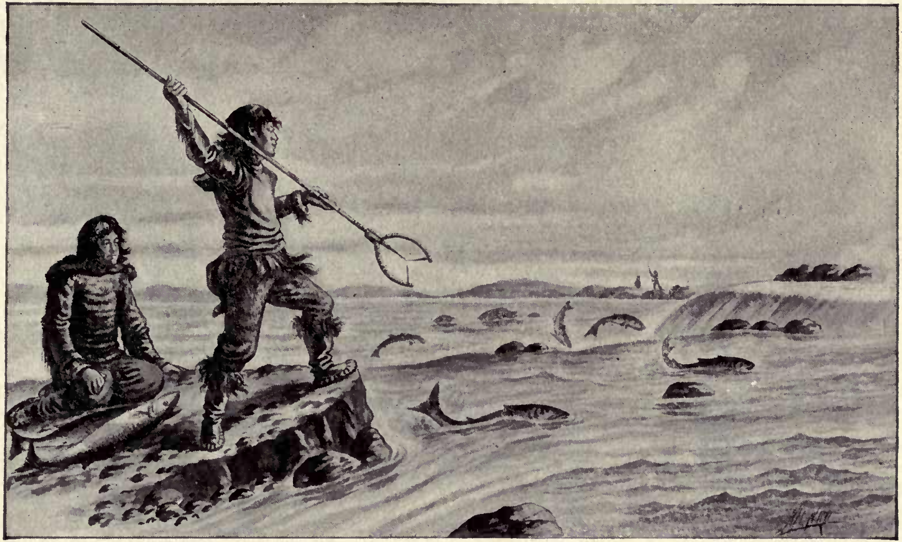
Sometimes the wood mouse will build himself the cutest kind of a house. After the birds have gone south, he will find some empty bird's nest, and build a roof over the top. He will leave a door on the under side through which he can come and go. Then no matter how cold and wintry the weather may be Mr. Wood-mouse will always be warm. Sometimes the snow may even cover over the top of his house, but he does not care, for that will make it all the warmer.

XXI

SILVER-KING, THE GREAT SALMON

Early in October the salmon will be found near the head-waters of all our great rivers in British America getting ready to lay their eggs. Mr. Salmon will be seen piling up a round heap of small stones and gravel just where some little brook empties into the large stream. Here at the mouth of the lttle stream will always be pure, sweet water, so you see it is a good place for the salmon's nest. When Mr. Salmon has gotten a good large pile of pebbles and sand arranged to suit him, he will set to work ploughing furrows through it. On Mr. Salmon's lower jaw is a beak or hook, that has been growing all summer just that he might use it in ploughing furrows in the nest for Mrs. Salmon in the autumn.

When Mr. Salmon has the nest ready, Mrs. Salmon will lay thousands and thousands of eggs in the furrows, and Mr. Salmon will cover



ESKIMO BOYS SPEARING SALMON IN THE RIVER RAPIDS them up. There is need that they lay a great number of eggs, for many of them are eaten by small fish. All the while that Mrs. Salmon is laying her eggs, there are a swarm of small fish swimming about the nest snatching them out. Mr. Salmon has to be very vigilant to keep them from eating up all the eggs.

By the time that the first fringe of ice forms along the edge of the pools the eggs are all laid, and Mr. and Mrs. Salmon are off to the sea again and the eggs are left to hatch when the water shall get warm enough in early spring.

In the spring the swift current will wash away the sand covering the eggs, and the warmth in the water will hatch them, then tiny mites of fish will come wriggling out of the eggs, tail first, in the bottom of the stream.

These fish are so small that you would have to look twice to see them. For some time they are not very hungry, but soon they are looking for larvæ, which are tiny mites of river life.

The little salmon, who is called a parr until he is a year old, soon gets very expert in picking up his living, but he early learns that he not only hunts for his own living, but he also is hunted to feed fish larger than himself. This is the way of life in rivers and in the great ocean, the big fish all feed on the little ones.

But the little salmon is very wary. He always stays near his hiding place, which is under a stone or root.

Whenever danger threatens him he will flash into his retreat so quickly that the eye could hardly follow him.

Up to the time the little salmon is a year old he wears a bright speckled covering something like the beautiful brook trout, but when he is a year old a great change comes over him. All of his bright red and yellow spots scale off and he puts on a shiny silver scale that covers him from head to tail. Now he is little silversides and no longer a parr, but a smolt.

With the putting on of this new silver coat a new impulse comes to the little salmon. Thus far he has been content to keep within a few feet of the nest where he was hatched, but now he must travel. Not only he, but all his brothers. So with one accord all the male salmon that were hatched at the mouth of the little brook start on a mad race down stream. I do not know that they understand where they are going, but they have really started for the great ocean.

Down through swift running shallows and through still pools they flash, all running a mad race for the sea. Soon they meet a great company of large salmon coming up from the sea. Now they must look out or they will be eaten.

It may be ten or twenty or fifty miles to the ocean, but they go in such a mad rush that they soon reach it and swim far out into this new and wonderful world.

Here upon the floor of the ocean is a great forest of cool green seaweed and many submarine plants, all waving with the pulsing of the water.

Here in the ocean, the little would-be salmon finds abundance of food, and about all he does is to eat, so he grows very fast.

When he reached the ocean he was about six inches long and weighed less than a quarter of a pound, but in a single month, living upon the food that the ocean provides, the young salmon increases his weight to a pound, and his length to a foot. In three months' time he will weigh four or five pounds, and then he will turn his nose back to the stream down which he came in the spring. His life in the sea has been very strange and very satisfying, but now there is something calling to him in the fresh water.

He will not ascend any stream that he happens to come across, but will head straight for the stream where he was hatched.

All of his brothers will be going back too, and his sisters, who are still small silversides, will be coming down stream to go to the ocean, just as the male salmon did three months before.

There will be many dangers waiting for the salmon on this his first year of ascending the stream, but if he is wise according to the wisdom of a salmon he will escape them all.

First, he will have to learn to jump the falls, and this is quite a feat. If you should happen to be standing by the stream when the fish were running, you would notice a bright splash, and a salmon would be seen to jump a foot or two out of the water just below the falls, then all would be quiet, but presently there would be a splash that would send up a bright spray of water, and a great silver salmon would leap clear over the falls and land in the pool above. It was a great jump and one that you would hardly believe that a fish could take.

On moonlight nights when the salmon are running, the bear will be seen crouching on a rock in the swift shallows waiting for his fish. When one flashes by within arm's reach, Bruin makes a quick stroke and the salmon flies out on to the bank and is caught.

The otter, who is the greatest fisherman of all quadrupeds, will lie upon a rock in the stream and take his salmon whenever and wherever he likes. The fishhawk and the loon also take toll from the stream and the salmon is usually their prize, so you see this fish has many dangers to face, and obstacles to overcome. But if he is lucky he will go back to the headwaters of the stream where he was born and be building a nest for his own mate the third year of his adventurous life.

XXII

WINTER VISITORS

When the flowers have faded and the bright autumn leaves have fallen from the trees and the old earth seems so bare and forsaken that it makes us for the moment very sad, then nature comes and spreads a soft white blanket over the fields and forest and tucking in all the seared flowers and ferns, bids them sleep sound until Springtime, saying that she will awaken them in good season.

Now this new blanket of snow puts all things right again, and we are glad that it is winter.

But our birds have nearly all flown south, and we should be very lonesome without them, did not nature send more to take their places. To be sure those that she sends are not so bright colored, or such sweet singers as our summer birds, but they are very interesting little fellows and they make up by their jaunty manners, what they lack in song.

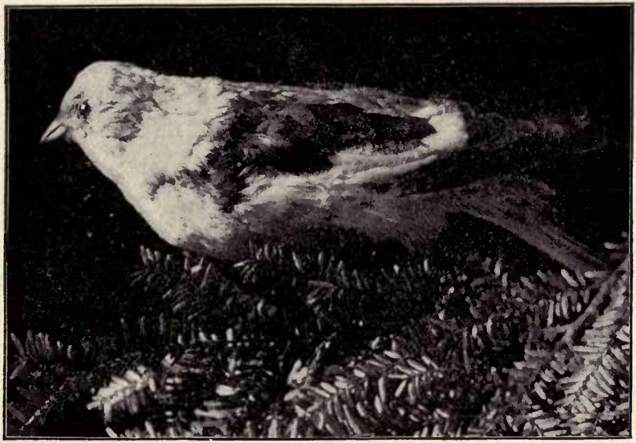
But where do these birds come from ? you may ask, and it is quite a natural question.

They come from the frozen Arctic—from the land of the midnight sun, where the great white polar bear and the walrus are found, and where the musk ox lives in large herds.

Perhaps the first junco who greets you, telling you just as plainly that winter is coming, as in the late winter the bluebird tells you that spring has come, has himself ridden upon the back of a musk ox. He also has doubtless seen the wonderful blue fox scurrying over the snow and the reindeer-sled carrying the Esquimaux upon the hunt.

It is a queer life that the children of that northland live, dwelling in a snow-house, or in a hole dug in the side of a hill, and eating blubber and dried fish.

As I have already told you, one of the first of these winter visitors is the snowbird. You will see them in flocks of a dozen or twenty. This is probably a brood, with the old birds and all



THE SNOW BUNTING

the young ones in a family going together and sharing one another's fortune. These little birds do a great deal of good, for they are weed-seed eaters, and each seed that they pick up saves the farmer a weed in his field.

But sometimes when the snow is very deep it is hard to find weed-seeds, and the snowbirds will be only too glad to take toll from your box of grain, if you are thoughtful enough to provide such a box for them.

Then there are the snow buntings, looking like a flock of great snowflakes, as they skim along. They, too, have come from the frozen northland and have seen strange sights.

On cold winters you may see a very handsome bird, the prettiest of all our winter visitors. He is about the size of a robin. His general color is a slatey gray, with darker markings, and also some very rosy red markings, often as bright as the red upon the bluebird.

It is a pleasant sight upon a winter day, when there is little or no color, to see a flock of these birds descend in the trees.

Often when people say that they have seen a robin in midwinter, it is a pine grosbeak instead, for a pine grosbeak that has red upon its breast looks quite like a robin redbreast.

Another dear little bird, who is much smaller than any of these I have mentioned, is the ruby-crested kinglet. This bird is so small that his strength and his wit would seem to be too slight to carry him through the bitter winter, but he comes to the old apple-tree near my study window day after day, so you see he is a match for old winter.

The noisy, quarrelsome English sparrow is always quite arrogant in the winter and they sometimes drive the other birds away from my grainbox, which is not nice, especially as the grain is intended for the other birds, rather than for them.

Each winter the nine-killer, or great northern shrike, comes down to hunt, and one of the best things that this cruel bird ever does, is to hunt English sparrows. Even then, I do not approve of his impaling them upon a barbed wire fence.

This nine-killer, or butcher-bird, may often be seen in the winter, in a city park, chasing small birds, but as long as he keeps after the English sparrows and lets our other winter visitors alone, it is all right.

Three or four winters ago a large number of great white Arctic owls were driven southward by the extreme cold and the poor hunting in the land of the midnight sun, and they made sad work in our New England forest.

These birds are very large and strong and it takes a great deal of food to satisfy their appetites. In the northland, where they usually dwell, they will frequently pick up the blue fox, which is smaller than our red fox, and kill him.

No one can tell how many crows, jays, partridges, woodpeckers, rabbits, and red squirrels were killed during that severe winter, here in New England, by these great white owls, but it was certainly a large number.

The little screech owl, who really does not screech at all, is also often heard in the winter, sounding his shrill mournful tremulous whistle, but he is also with us in the summer, so is not a winter visitor.

There are also other birds who are hardy and brave-hearted who stay with us the whole year through. The grave crow will often be seen in the orchard picking the seeds from a frozen apple. The noisy jay will come to the corncrib for corn, or squall derisively from the edge of the woods. It is very pleasant to see him, with his bright blue uniform and his gay topknot.

Most of the woodpeckers stay with us all the winter through. But our sweet singers are gone. The blithe bobolink is in the sunny south, getting fat upon rice, where it is estimated that he eats two million dollars worth each year.

The robin and the oriole are also in the sunny south. In Georgia the robin is caught in great numbers and made into pie, sad to relate.

From this chapter my little reader will see that our winter visitors are almost as important as those that come in the summer, for they come when we are lonely and in need of their company. If they are so brave to fly hundreds of miles to see us, we can at least give them an occasional handful of grain to keep them from starving.

XXIII

THE USES OF TAILS

I think it will surprise you children to learn of some of the uses that tails may be put to among animals, birds, and fishes. I will tell you of a few of these in this chapter, but I shall not remember them all.

To all of the birds, and the fishes, the tail is a rudder by which they steer when swimming and flying.

It is only the birds with long tails that can dart this way and that, now rising and now falling, and turning from left to right with the greatest ease. The birds with short tails have to content themselves with flying in a straight direction, or if they do turn, it will be slowly, while the birds, like the swallow, can skim and dart.

The fish turns himself in the water by means of his tail and it also helps him forward, while the queer shrimp pulls himself backwards through the water, by means of his tail, this being his only mode of swimming.

With such large fishes as the whale, the tail is a terrible weapon of defense. With one blow of his tail, the whale will smash the stoutest rowboat to pieces and send its occupants in every direction.

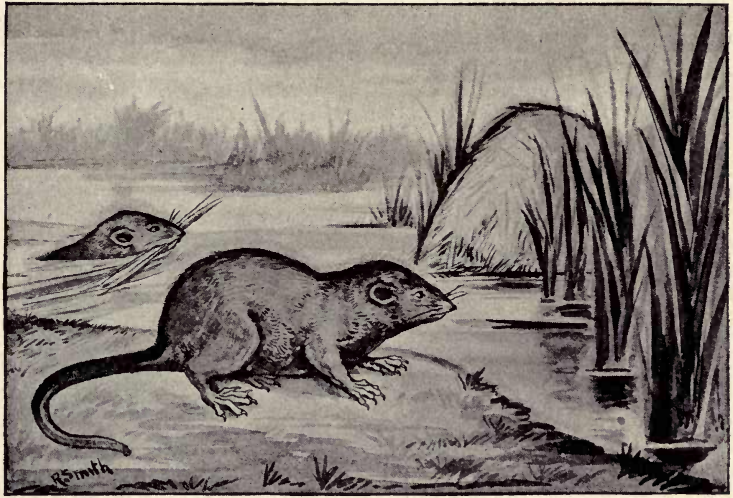
The queer porcupine also uses his tail, as a weapon, but in quite a different way. This strange animal is covered with long sharp quills, some of them three inches in length. When the porcupine is attacked he crouches down closely upon the ground, so as to protect his stomach, which is not covered with quills, and strikes viciously with the tail, which is full of his sharpest, longest quills. If these only lodge in an enemy, they will often travel clear through the body, frequently causing death and always great agony. All of the wild creatures soon learn to let the porcupine alone and he can go whenever and wherever he wishes without much fear of being disturbed.

The squirrels, like the birds and the fishes, use their tails as a rudder. Whenever a squirrel jumps from a great height he keeps his balance, and partly steers himself by means of his tail. While the flying squirrel probably could not fly at all without his broad, flat tail which helps let him down easy in his long swift coast.

The beaver, the otter and muskrat, like the fish, all use their tails in swimming. The otter uses his much more than the others, and that is probably why he is the best swimmer of all quadrupeds.

But the beaver's broad flat tail, which is like the tail of no other animal, serves him in many ways. If he is building his mud house it is a good trowel with which to smooth off the mud. He also can carry dirt upon it if he has a mind to. When he is cutting down a tree, standing upon his hind legs, the tail is handy to balance him.

When the beaver colony is busy upon a large dam, one beaver usually is a sentinel watching from some advantage point, that no enemy may approach unobserved. If he scents danger, he brings his broad, flat tail down upon the



MUSK RATS

water with a resounding slap and all the beavers disappear as though by magic.

To the little dappled fawn, fleeing with its mother through the woods upon a dark night, the white tail of its parent, which is called the white flag, is a beacon light and if it is an obedient fawn, it always follows where the white flag leads, and thus keeps out of danger.

To the little bunny in the laurel swamp, the round comical tail of its mother is a guiding star that leads to safety, and which it is dangerous to lose sight of.

The larger quadrupeds, like the horse, the cow, the mule, and the zebra, use their tails as a switch with which to keep off the flies in hot weather. Sometimes these pests would drive the animals frantic were it not for these good brushes.

To the rat his tail is a strong rope, with which he accomplishes many feats that he could not do without it. When the rats find a nest of eggs, which they wish to carry away and hide against the time of need, it is a problem for them to know how to carry them, for they are smooth and hard to hold on to.

Finally the problem is solved and one rat lies down upon his back with an egg firmly held between his forepaws, while his comrades drag him away by his tail. So by means of his strong tail he is converted into a kind of stoneboat, or drag.

It is also said that rats will let themselves down from great heights, where they do not dare to jump, by holding on to one another's tails.

One of the pictures that delighted me in an old natural history, when I was a small boy, was that of an old opossum carrying her young across a stream. She made her babies all wind their tails about hers, which was held out stiff, and she was carrying them across, all strung upon her tail.

The old opossum will often wind its tail about a limb in the persimmon tree, and go to sleep just as unconcernedly as though it was on the ground. There is no danger either that the tail will forget and let go.

All the members of the monkey family use their tails in climbing, or to swing by, as you will at once see by watching their antics in a zoo.

Upon many of the birds, the tail is a gorgeous ornament. What would the peacock be without his tail? Even the rooster seems proud of his rainbow curved tail, especially if his plumage is bright colored.

Upon the cat family the tail is an ornament and it has a language all its own. Such is the lashing of the lion's tail, or the gentle swishing of pussy's.

Without a tail even our intelligent friend, the dog, could hardly tell us how much he loved us, or how happy he was at our home-coming.

XXIV

THE LONG SLEEP

There is a wise provision in nature, by means of which the flowers and plants rest when they have spent their strength in flower and fruit.

Just as children need sleep and rest, which they take each night when the dark mantle is spread over the earth, so the flowers take their sleep and rest each winter.

It is for this, as well as to keep them warm, that each autumn Nature spreads a soft white blanket of snow over them and bids them lay down to sweet sleep, saying that she will awaken them in time for the first warm puffs of the south wind.

In the same way certain animals roll themselves up into furry balls when the cold weather comes, and sleep away the winter months.

All summer long the woodchuck has been fattening himself, that he might have sufficient flesh to keep him warm and to nourish him when the cold should come. It was for this that he raided the farmer's bean patch, and fed so persistently all summer. Now that the cold has come he is snug and warm in his hole, several feet under the snow. So that now all the snow that is piled above him but helps to keep him warm, and the cold cannot get at him. He will not stir abroad until the warm spring days.

The squirrels are also sleeping in their nests in the hollow trees, or in the hammocks that they have hung in the tree tops.

The woodpeckers and the owls also sleep away most of the time for if one is sleeping and not stirring about, he will not need as much food as though active, and food is very hard to find these bitter winter days, when earth is covered with snow, so the wise little creatures keep quiet and do with less food. You will often see where a gray squirrel has dug down under the snow to find nuts, but for the most part he depends upon his winter store, which will be sufficient if he has been a provident squirrel.

But the most interesting of all the wild creatures that sleep in the winter is Bruin, because his sleep is the longest.

In the warm months the bear family live upon roots, berries, and many kinds of vegetable food. Occasionally they vary this diet with a pig or some mutton, but for the better part of the year the bear is a vegetarian.

When the snow and the cold weather comes all these sources of food are gone, so the bear has nothing to do but to hibernate.

But he has been planning for this all the summer and autumn, so his ribs are well covered with fat, which will last him until springtime.

The smallest of all the bear family is the raccoon, who is really a little brother to the bear. The raccoon has a long ringed tail, which is quite different from the tail upon a real bear, but he has many of the other bear characteristics.

As the autumn months went by, the raccoon was fattening himself in the cornfield, or perhaps even helping himself to a pumpkin, scooping out the seeds and eating them with a keen relish so that when the cold comes, he is well fitted for his long winter sleep.

The black bear, who is the smallest of the bear family, next to the raccoon, sometimes sleeps in a hollow log which he will find lying upon the ground, but he more often makes himself a den under the fallen top of a tree. Here the snow will drift over him covering him up and keeping him warm. There is always a small hole left up through the snow. This is kept open by the bear's warm breath, which continually melts it.

Here in the warm den under the snow the little bears are born while their mother is still half asleep. For the size of their mother, the little bears are about the smallest of all woodland babies. It is not until they are three or four months old that they go abroad with their mother.

When the old bear appears in the early spring she is sleek and fat.

As she has been sleeping all the time she has not worn off her flesh, but she soon gets poor, and her coat becomes rusty.

When she first comes forth after the winter sleep, she does not eat ravenously of meat, for she knows that if she did it would make her sick. Instead she eats buds and roots, and does not break her fast upon meat for a week or two. Then if the opportunity offers she will visit a neighboring pig sty and come away with a squealing spring pig.

The grizzly bear, who is three or four times as large as the black bear, also dens up in the winter, but he does not den up in a hollow tree for the simple reason that a hollow tree would not be large enough to hold him. Instead he finds a cavern in the rocks and curls up in the darkest corner. If he cannot find a cavern to his liking, he will often do some digging, to fashion it as he wants it.

In the warmer countries, where food is more plentiful during the cold months, the bears do not den up as long as in the cold country, where they sleep nearly half of the year.

The frogs, the toads, the snakes, the lizards, and a myriad other crawling, creeping things, also sleep through the cold winter months.

You will see by this chapter what good care Nature takes of her children. When they need sleep she has given them an instinct that tells them to seek it, even under a bed of snow.

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